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CONTINUING DEVELOPMENT OF THE PERSON-PORTABLE ANALYTICAL SYSTEM

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CONTINUING DEVELOPMENT OF THE PERSON-PORTABLE ANALYTICAL SYSTEM

by

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ABSTRACT

Developmental work on the Level II (Person-Portable) Analytical System has focused on the following three instruments:

1) Century Systems Corporation Model 128 Organic Vapour Analyser (OVA)

2) HNU Systems Inc. Model PI-101 Photoionization Analyser (HNU)

3) Hach Company Direct Reading Engineer's Laboratory Model DR-EL/4 (Hach Kit)

Calibration work involving EETD Priority List chemicals has been carried out with fifty-one chemicals for the OVA and forty-one chemicals for the HNU. Meter scale overlays which allow direct reading of concentration in ppm for each chemical have been designed. Studies have been performed in order to evaluate the effects of factors such as temperature and instrument-to-instrument variability on calibration curves. Preliminary versions of field manuals have been drafted which are specifically designed for use by spill responders utilizing the meter scale overlays and calibration procedures described herein.

A literature survey and experimental work on the Hach Kit have focused on the development of quantitative colourimetric methods for priority list organic chemicals in water which are suitable for addition to the Hach Kit. Experiments have been done to evaluate the aspects of stability, relationship between colour intensity and analyte concentration, and sensitivity. Of the twelve methods evaluated in the laboratory, three show promise for further development because they were quantitative, reproducible, and had detection limits within the range of water quality standards.

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INTRODUCTION

Following a chemical spill incident, implementation of effective response measures requires rapid and reasonably accurate determinations of the concentrations of spilled chemicals in air, water, and soil in the vicinity of the spill site (1). Air sampling data are the most critical immediately after a spill incident since they are needed to make decisions on protection measures for both spill responders and the surrounding population. Measurements of concentrations in surface water are important since this phase can provide a pathway for transport beyond the immediate spill area. Data on soil and surface water are useful in planning clean-up operations and assessing environmental damage. Recognizing that these analytical requirements were not adequately met in most spill situations, the Environmental Emergencies Technology Division (EETD) of Environment Canada initiated, in 1980, the Chemical Hazards Emergency Countermeasures (CHEC) program to implement an immediate response to spills of environmentally hazardous chemicals. As part of this program, existing analytical methods and instrumentation were reviewed and grouped into five classifications or levels based on criteria of portability, accuracy, and complexity. Levels 1, 2, and 3 were considered most promising for spill monitoring and EETD decided to actively pursue methods belonging to these levels. The levels are:

Level I: Pocket-portable detectors (based on reagent colour changes)

Level II: Person-portable detectors based on electronic detectors (meters)

Level III: Vehicle-portable instruments: normally found in a fixed laboratory. Microcomputer technology used to simplify operation.

In each case, the methods were to be suitable for use by personnel without extensive training in chemistry or analytical instrumentation methodology, and working under emergency conditions. Developmental work on each of the three levels was warranted since they each have unique advantages. For instance, level II instrumentation is more easily transportable than level III instrumentation and will most likely require less maintenance and operator training. In most cases, however, it will not be as accurate.

This report describes the progress made from June 1, 1984 to March 1, 1985 on the continuing development of the Level II Analytical System. Prior to describing the current contract work in detail, a brief review of previous work done on Level II will be presented.

STATE OF THE LEVEL II ANALYTICAL SYSTEM PRIOR TO JUNE 1, 1984

GENERAL

Details of the developmental work prior to June 1, 1984 on the Level II analytical system which had been carried out by several contractors are available in several reports (2,3,4,5). Initial work on the Level II project involved evaluating a wide range of commercially available instruments and methods. In choosing specific equipment to adapt to the spill site program, portability, accuracy, ease of use, and the capability to analyse for a large number of the chemicals on the priority substances list were considered as important criteria. Air monitoring instruments which satisfied these criteria were the Century Systems Corporation Model 128 Organic Vapour Analyser (OVA) and the HNU Systems Inc. PI-101 Photoionization Analyser (HNU). While there were no products available which satisfied the Level II criteria for water and soil analysis for both organic and inorganic substances, the Hach Company Direct Reading Engineer's Laboratory, Model DR-EL/4 (Hach Kit), was the most promising candidate for developmental work. Accordingly, work to date has focused on the OVA and HNU for air analysis and the Hach Kit for water and soil analysis. A brief discussion of these instruments is given below. Detailed descriptions are available in a previous report (4) and in the manufacturers' manuals.

OVA 128

This instrument is basically a portable flame ionization detector (FID). In operation, a continuous metered flow of sample air is drawn into the detector chamber where organic molecules are burned in a hydrogen flame, producing positively charged, carbon-containing ions. The ions are driven to a negatively charged collector electrode where a current is generated which is proportional to the ion collection rate. The current is measured with a pre-amplifier, the output signal from which is further amplified and displayed on the meter assembly situated on the hand-held probe assembly. The detector exhibits inherently high sensitivity and responds to a wide range of organic chemicals. The OVA has its own hydrogen supply and a rechargeable 12V DC battery allowing for a minimum of eight continuous hours of operation.

HNU PI-101

This instrument is basically a portable photoionization detector (PID). In operation, a continuous flow of sample air is drawn by a DC-operated fan into an ionization chamber located on the hand-held probe. Photons emitted by the 10.2eV UV source pass through a transmitting window into the ionization chamber where this radiation is absorbed by molecules having ionization potentials of approximately 10.2eV or less.

The positive ions produced are driven to a collector electrode, where a current proportional to the concentration of sample substance in air is generated. This current is amplified and used to drive a meter on a readout unit. The HNU is a selective detector, since chemicals having ionization potentials much greater than 10.2 eV will not be ionized and therefore will not produce an instrument response. The HNU is capable of detecting a broad range of organic compounds, as well as a few inorganic compounds (eg. H_2S and NO_2). Similar to the OVA, the HNU utilizes a rechargeable battery which allows 10 hours of continuous service.

HACH DR-EL/4

The Hach Kit is a portable laboratory containing a Spectrophotometer/Conductivity meter, a pH meter, a digital titrator, and premeasured reagents to carry out analysis for many inorganic chemicals in water including several on the EETD priority list (1). With the exception of phenol, however, there are no methods for organic chemicals. The Hach kit can be used sucessfully by personnel who have not received extensive training in laboratory analysis or instrumentation.

PREVIOUS EXPERIMENTAL WORK ON OVA AND HNU INSTRUMENTS

Initial efforts were directed towards performance evaluation of the OVA and HNU instruments. Initial findings included the following:

1) The sensitivity and ease of use of the OVA and HNU make them suitable for use at spill sites.

2) Measurements using these instruments are fairly stable and reproducible but the response factors determined are not always in agreement with those supplied by the manufacturer. Also, instrument response is not always linear over the ranges of interest.

3) Several maintenance problems occurred with both these instruments which were not adequately covered in the manufacturers' instruction manuals.

4) The instruction manuals provided with both the OVA and HNU are well written but not appropriate for use as field manuals by spill respond-ers. Shorter, more easily understood documents are needed.

Based on these findings, further experimental work was undertaken to produce accurate calibration data for as many compounds as possible from the EETD Priority List (1) and to resolve the maintenance problems.

PREVIOUS WORK ON HACH KIT DEVELOPMENT

Seven of the Hach Kit methods for inorganic substances were evaluated in the laboratory and found to perform as claimed by the manufacturer. A preliminary literature survey of methods for organic chemicals was carried out. The results of this survey, in the form of standardized descriptions of each method, were delivered to EETD separately and do not appear in the 1983-84 Level II contract report.(5) The methods, which cover a wide range of priority list chemicals, vary considerably in their complexity including many which are too complex to satisfy Level II criteria. The majority of the methods are not specifically designed for environmental samples so that the effects of interfering substances from soils and natural waters have not been considered. Also, no work has dealt with procedures such as extraction and concentration.

CURRENT CONTRACT WORK

GENERAL

Recent efforts have been directed towards bringing the OVA and HNU instruments to the "field-ready" stage for many of the priority list chemicals and continuing developmental work for organic chemicals using the Hach kit. The following tasks have either been completed or are underway:

1) Completion of calibration experiments on the OVA and HNU instruments for the EETD priority list chemicals.

2) Several studies on factors which are relevant to spill site conditions and which would affect the accuracy of readings from the OVA and HNU instruments.

3) Conversion of the OVA and HNU calibration data to a form usable by spill responders, i.e. meter scale overlays and primary calibration procedures.

4) Development of field manuals for the OVA and HNU instruments. These manuals will be used with the meter scale overlays and associated primary calibration procedures.

5) A comprehensive literature review of methods for analysis of organic compounds in soil and water which could be used with a modified Hach kit.

6) Laboratory evaluation and optimization of the above mentioned methods to comply with the Level II criteria.

OVA AND HNU CALIBRATION

METHODOLOGY

In order to produce reliable data of the instrument response to priority list chemicals, it was necessary to prepare accurate concentrations of these substances in a safe and convenient manner. The methodology for chemicals which are normally liquids was developed by the previous contractor and tested extensively for accuracy (5). It involved injection of a known quantity of the chemical into a bag of flexible, inert, clear material (Tedlar) containing an accurately measured quantity of ultrapure air. After evaporation and thorough mixing was achieved, the mixture was sampled by several instruments within a short time period. Measurements were taken in a narrow temperature range, (24-26° C) and sufficient time was allowed during each measurement to produce a fairly constant result (< 5% drift/ minute). Readings for most substances became stable after a few seconds but several minutes were needed for some of the liquids with high boiling points (B.P. > 100° C). During all calibration experiments, instrument sensitivity was adjusted using the primary calibrant standards for each instrument: 101 ppm benzene for the HNU and 93 ppm methane for the OVA. In each case, instrument sensitivity was adjusted to read the nominal concentration of the primary calibrant standard at the beginning of each day of experimental work.

In continuing the calibration work on the priority list of chemicals, we used this method. For quality assurance, we repeated experiments on several compounds studied previously by Lockwood and Halman (5) and obtained agreement within an instrument-to-instrument variability of <10 %.

In addition to the priority list chemicals which are liquids under ambient conditions, we also studied several gaseous compounds. In these studies, the sample preparation method was modified to include the introduction of known quantities of gases from lecture bottles. This was done by drawing the gas from a flowing stream into a gas-tight syringe which was then emptied into the Tedlar bag.

The range of concentrations studied for each chemical was determined by factors such as toxicity limits (e.g. TLV, IDLH) and vapour pressure (7). Sufficient data in eash case was collected to provide a statistical analysis of instrument response and to determine the shape of the response vs. concentration curve. The statistical analysis of the calibration data and its conversion to a form suitable for field use will be discussed later. First, it is necessary to address several factors influencing both the accuracy of experimental work and field measurements.

Although the conditions at a spill site are very different from those used in our experiments, we feel that sampling static test atmospheres in the Tedlar bags is the best way to measure instrument response as a function of concentration in the absence of any perturbing

effects. The effects of factors such as sampling time, temperature, and other environmental conditions on the instrument response can then be studied separately and taken into account when evaluating the accuracy of field measurements.

TEMPERATURE/TIME EFFECTS

The temperature dependence of the OVA and HNU responses was investigated by carrying out calibration experiments in a walk-in environmental chamber under constant temperature. OVA and HNU responses to cylinder standards of benzene/air and methane/air respectively were measured at 4° , 15.5° , 24° , 27.5° , and 32° C. HNU responses were temperature-independent over the experimental range. OVA responses varied inversely with temperature to an extent which varied from instrument to instrument and with the gas being analysed. Table (1) summarizes the results of the temperature study.

With most of the compounds studied, stable readings on both instruments were reached after a few seconds. For some compounds with high boiling points, however, several minutes were needed for a stable, maximum reading to be attained. This effect should be considered when developing procedures for spill site measurements.

INSTRUMENT-TO-INSTRUMENT VARIABILITY

In assessing the accuracy of OVA and HNU data, a key factor is variability in response from instrument to instrument. This is especially important if calibration data from several instruments is to be averaged to form one calibration data from several instruments is to be adjusted to a standard sensitivity, readings over a range of concentrations will depend on the shape of that particular instrument's response curve. For both OVA's and HNU's, results on several instruments showed that if the sensitivity of each instrument is adjusted using a primary calibrant standard, subsequent measurements will have a relative precision of 6-12 %. Tables (2) and (3) show the results of experiments performed on six substances using four OVA's and five HNU's respectively. Primary calibrations and measurements were performed on the same day. At concentrations close to the instruments' lower detection limit, the relative standard deviation increases above 10 %. Several of the experiments also show an increase in relative standard deviation at higher concentrations. It is possible that this is due to incomplete evaporation and mixing.

GAS CHROMATOGRAPHY (GC) MODE

The OVA may be operated in either the "survey" mode, if the spill situation involves only one volatile organic substance, or the gas chromatography (GC) mode if more than one substance is involved. This capability should be useful as a screening procedure to verify that one main component is present prior to quantitative analysis using the

"survey" mode. A study of the GC mode was carried out to ascertain its usefulness for spill site applications. Two OVA's were equipped with Portable Isothermal Packs (PIPS, Foxboro Company), which maintained isothermal conditions at either 0° or 40° C. Three different types of GC columns (manufactured by Foxboro Company) packed with 3% diisodecyl phthalate on Anakrom A, AW, 60/80 mesh (B), 10% OV-101 on Anakrom Q, 60/80 mesh (G) or 10% 1,2,3 Tris(2-cyanoethoxy) propane on Anakrom C 22A, AW, 60/80 mesh (T) can be used with this system. Mixtures of five or seven selected chemicals, at several concentrations ranging from 10 to 400 ppm in air, were analysed on two different types of columns (T and G) at 0° C. Retention times were approximately 60 - 80% of those reported by the manufacturer (8). For compounds which have retention times less than 1 minute, under these conditions, the peaks are not clearly defined on the recorder chart, on which 4 marks per second are made. For compounds which have retention times greater than eight minutes, the peaks may be too broad for accurate determination of retention times. Our retention times, and those supplied by the manufacturer, indicate that only a fraction of the priority list compounds fall within the optimum range on any of the three columns. Thus, while the OVA's GC mode may be used to determine the presence or absence of multiple components, it will usually not be useful for identification and quantitation of the components. Table (4) compares our retention times with those reported by the manufacturer (8).

DATA HANDLING PROCEDURES

In carrying out the calibration work , a primary concern has been the linearity of response over the concentration range of interest. Linear responses would be desirable since they would simplify both laboratory calibration and field measurement aspects. Unfortunately, experimental work done under this and last year's contract indicates that inherent deviations from linearity occur with both instruments (5,6). Figures (1) and (2) show instrument response vs. concentration curves for the OVA and HNU respectively. It is clear that HNU sensitivity is a decreasing function of concentration. Results for the OVA indicate variations in sensitivity with concentration if data from all three ranges are taken together. Another approach is to consider the data from each range separately. By using linear regression, we found that the data for the x1 and x10 ranges taken together conformed very well to a straight line in almost all cases. A better fit was obtained when data from the x100 range was fitted separately. Using this approach, good correlation coefficients were obtained as summarized below:

(x1, x10 RANGES):	.99885	- average of results on
(x100 RANGE):	.99516	51 substances

Response calibration data for a total of 51 substances on the OVA and 41 substances on the HNU were obtained during this study. The vast majority of these are pure compounds although a few are mixtures which are produced and transported commercially. Tables (5) and (6) list all

priority list substances for which data was obtained. Once the experimental study was completed, it was necessary to process the data into a form suitable for field use. In doing this, decisions were made in consultation with EETD as to the field methodology.

Data processing was carried out on a DEC PRO 350 and an IBM PC using the RS/1 and Lotus 1-2-3 software packages respectively. All data on priority list substances were corrected to a standard instrument sensitivity. This involves multiplying all readings by a factor such that the primary calibrant standard reading becomes equal to its concentration. This procedure is valid only if the instrument response to any chemical remains proportional to the instrument response to the primary calibrant standard as instrument sensitivity (span setting) is changed. This was verified for both OVA and HNU instruments using data for several priority list substances. Typical HNU results are shown in figure (3) for different concentrations of acetone relative to the benzene standard. In this case, instrument responses for the two substances are linearly related as span setting is varied. This type of behavior is observed even at higher concentrations where instrument response is non-linear with respect to concentration. The linear relationship in figure (3) involves the relative responses to different substances and does not imply a linear dependence on instrument setting. In fact, HNU response is a highly non-linear function of instrument span setting as indicated in figure (4).

Next, each set of readings for each substance and concentration was averaged to produce one set of readings vs. concentration based on the response of several instruments. Several fitting procedures were tried before deciding on the following functions:

OVA	x1, ,10 ranges	$R = a1 \times C + b1$
	x100 range	$R = a2 \times C + b2$
HNU	all ranges together.	$R = a3 + b3 \times (1 - \exp(-C/c3))$
		or *
		$R = a4 \times C + b4$

Where R = instrument reading C = concentration in ppm

a1,b1,a2,b2,a3,b3,c3,a3,b4 are fitting parameters

* choice of fitting function based on visual inspection of data.

Figures (5) and (6) show the OVA and HNU fittings for acetone. Statistical analysis was done for all fittings. In all cases, excellent correlations were achieved as shown by the following correlation coefficients:

	OVA	HNU
(Average for all substances):	.996604	.997313

Tables (5) and (6) list the values of fitting parameters and associated statistical information for all substances studied for the OVA and HNU respectively. All raw and intermediate experimental data are available in Appendix . Table (7) is a sample RS/1 table showing actual and standardized data for several instruments as well as data averages.

In adapting the fitted data for field use, a strategy for making spill site measurements was first worked out in consultation with EETD. The goal was to maximize the ease with which readings could be taken under field conditions without undue loss of accuracy. The strategy is based on the following points:

1) OVA and HNU instruments will be maintained and adjusted to the standard sensitivities using the primary calibrant standards at the location from which they will be deployed to a spill site.

2) Each instrument will be supplied with a set of transparent meter scale overlays, one for each priority list substance. These overlays will be easily fitted and removed.

3) No sensitivity adjustments will be needed at the spill site. Once the identity of the spilled substance is known, the appropriate overlay can be fitted in a matter of seconds. The overlays will read directly in ppm of the spilled material in air.

Meter scale overlays have been designed in conjunction with EETD for both the OVA and HNU using the values of derived fitting parameters. This involved calculating, from the fitted values of instrument reading as a function of concentration and converting the instrument readings into angles measured from the zero line on each scale. The meter scale overlays will have a reasonable number of marks corresponding to a set of evenly spaced concentrations for each range.

Because of the differences in instrument sensitivity and range of concentrations studied for each substance, the acceptable sets of concentrations to use in deriving the meter scale overlay spacings were obtained by trial-and-error calculations. This procedure was greatly facilitated by using a spreadsheet program relating concentration, instrument reading, and angle of deflection. This allowed recalculating with a new set of concentrations within a few seconds. EETD is finalizing the design for the overlays including an easy method for fitting and removing the overlays. Figure (7) shows typical OVA and HNU meter scale overlay designs.

Preliminary versions of field manuals which are short, easily understood, and geared for use with the meter scale overlays have been drafted for both instruments and delivered to EETD.

HACH KIT DEVELOPMENT

GENERAL

In searching for quantitative methods of analysis for organic chemicals which are suitable for being used by the Hach kit methodology, a literature survey was carried out. The following criteria were used in assessing whether a method warranted laboratory evaluation:

1) Methods should make use of the equipment and, if possible, some of the reagents already present in the Hach kit.

2) The complexity of the procedures and training required to utilize them should be comparable to the present Hach kit methodology.

3) Methods which can be used to analyse for several priority list chemicals should be given preference over those which are selective for a single substance.

4) Lower detection limits should be within the range of water quality standards (7,9).

Initially the literature survey sought methods for the first fifty chemicals on the EETD Priority List. Next, the 150 priority list chemicals were arranged into groups, each of which could be amenable to analysis by a single method. Literature sources included published methods for quantitative analysis of water as well as qualitative or "spot tests" which normally are used to detect the presence or absence of a chemical. The methods sought will utilize the Hach Kit's spectrophotometer or digital titrator. In the following section, a brief description of each of the methods and a summary of the results are presented:

Le Rosen Spot Test for Aromatics (10)

This test involved reacting the analyte with a reagent consisting of 37% formaldehyde solution (in methanol) and concentrated sulphuric acid. A red precipitate was formed in the presence of aromatics. Several compounds were tried to dissolve the precipitate. These were: chloroform, hexane, acetic acid, diethyl ether, and methanol. In all cases, the precipitate either remained unchanged or further precipitation occurred.

Dinitrobenzene/Alkali Spot Test for Aliphatic Ketones. (10)

This test involved two reagents: o-dinitrobenzene in methanol and a saturated methanolic potassium hydroxide solution. These reagents reacted with aliphatic ketones in organic solvents to form a violet

colour. The spiked water sample was extracted with diethyl ether. Quantitative results were obtained for acetone, methyl ethyl ketone, and methyl isobutyl ketone. Unfortunately, the lower detection limit for these chemicals was approximately 30,000 ppm, which is considerably higher than safe drinking water limits. Figure (8) shows absorbance readings at 550 nm vs. concentration of acetone.

Sodium Nitroprusside Spot Test for Methyl Ketones (10)

This test involved sodium nitroprusside and sodium hydroxide aqueous solutions, and glacial acetic acid. These reagents reacted with methyl ketones in water to form a red soluble product. It was not possible to obtain reproducible quantitative results. Figures (9) and (10) show the results obtained from multiple determinations of the concentrations of acetone and methyl ethyl ketone respectively.

Sodium Bisulphite/Starch/Iodine Spot Test for Ketones (10)

This method was not quantitative for ketones. The relative amounts of reagents: sodium bisulphite and starch solution blued with iodine and the order in which they were added was varied but without success.

Carbon Disulphide/Ammonium Molybdate Test for Primary and Secondary Alcohols (10)

This test involved carbon disulphide, ammonium molybdate, sulphuric acid, and powdered sodium hydroxide. These reagents reacted with primary and secondary alcohols to form a violet-coloured complex when extracted with chloroform. Experimental work included varying the amounts and order of addition of the reagents. However, it was not possible to obtain detection limits within the desired range.

Lanthanum Nitrate/Iodine Test for Acid Anhydrides (10)

This test involved lanthanum nitrate solution, iodine solution, and diluted ammonium hydroxide. Varying amounts of these reagents were tried. A purple precipitate was formed in acetic anhydride. This method was not quantitative. The method was also not quantitative for vinyl acetate.

p-Phenylenediamine Test for Aldehydes (10)

This test involved the catalytic acceleration of oxidation of p-phenylenediamine by hydrogen peroxide. It utilized an alcoholic phenylenediamine solution, diluted acetic acid, and a hydrogen peroxide solution. This method produced a yellow colour when used to detect either formaldehyde or n-butyraldehyde but quantitative results could not be obtained.

Ferric Hydroxamate Method for Carboxylic Esters (11)

This method detected carboxylic esters or suitable derivatives by allowing them to convert hydroxylamine hydrochloride to an hydroxamic acid which then formed a magenta-coloured complex with ferric chloride under acidic conditions. Tests were conducted to analyse for vinyl acetate, methyl methacrylate, acetic anhydride, maleic anhydride, phthalic anhydride, acrylonitrile, chloroform, 1,1,1-trichloroethane, and propylene oxide. The results for vinyl acetate are shown in figure (11). These results appear to be reproducible and quantitative with a lower detection limit range of 20-200 ppm. Therefore, this method may be a promising candidate for the Level II program. The results obtained for acetic anhydride are shown in Figure (12). These results appear to be reproducible, quantitative, and have a detection limit range of 10-20 ppm. Quantitative results were obtained for methyl methacrylate. However, the lower detection limit of 9,000 ppm made this method unsuitable. Preliminary studies with maleic and phthalic anhydride were inconclusive since there was some difficulty in producing complete dissolution of samples. This method did not detect acrylonitrile, chloroform, 1,1,1-trichloroethane, and propylene oxide.

o-Nitrobenzaldehyde Test for Ketones (10)

This method involved a saturated solution of o-nitrobenzaldehyde in sodium hydroxide solution. These reagents reacted with ketones to form a blue coloured complex when extracted with chloroform. Quantitative results were obtained for the three ketones tested. Lower detection limits of 400 ppm, 200 ppm, and 1600 ppm were obtained for acetone, methyl ethyl ketone, and methyl isobutyl ketone respectively. Results for these three substances are shown in Figures (13), (14), and (15). This method may be a promising candidate for the Level II program.

Chromotropic Acid Method for Determination of Formaldehyde (12)

This test utilized chromotropic acid in the presence of concentrated sulphuric acid to react with formaldehyde forming a purple-coloured complex. The method was quantitative with a lower detection limit of 1 ppm formaldehyde. This method may be a promising candidate for the Level II program.

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13) "The Chemistry of Soil Constituents", Chapter 3, D.J. Greenland and M.H.B. Hayes, Eds., Wiley Interscience, London (1978)

TABLE 1

OVA TEMPERATURE STUDY

SAMPLE	TEMPERATURE (°C)	INSTRUMENT RESPONSE
181 ppm BENZENE	3.5	172
	15.5	149
	24	148
	27	140
	32	124
93 ppm METHANE	3.5	99
	15.5	98
	24	94
	27	90
	32	88

HNU TEMPERATURE STUDY

SAMPLE	TEMPERATURE (°C)	INSTRUMENT RESPONSE
10 ppm BENZENE	3.5	10
	15.5	17
	32	17
101 ppm BENZENE	3.5	98
	15.5	145
	32	147

TABLE 2

INSTRUMENT-TO-INSTRUMENT VARIABILITY - OVA RESULTS

1,3-BUTADIENE

CONC.	READINGS	
(PPM)	AVE.	REL.STD.DEV
0.0	0.00	-
15.0	4.39	14%
25.0	7.79	12%
100.0	32.22	6%
150.0	49.34	4%
200.0	71.86	4%
250.0	89.23	4%
500.0	181.94	5%
1000.0	318.37	4%
2000.0	817.64	5%

ACETIC ACID

CONC.	READINGS	
(PPM)	AVE.	REL.STD.DEV
0.0	0.00	-
20.0	3.41	16%
40.0	7.99	10%
100.0	20.48	8%
200.0	41.54	6%
300.0	64.87	5%
400.0	87.02	6%

DIMETHYL ETHER

CONC.	READINGS	
(PPM)	AVE.	REL.STD.DEV
0.0	0.00	-
10.0	1.36	19%
40.0	5.70	13%
150.0	19.91	10%
300.0	41.46	11%
450.0	66.51	9%
600.0	98.70	9%
900.0	125.71	3%
2000.0	332.61	2%

MONOMETHYLAMINE

CONC.	READINGS	
(PPM)	AVE.	REL.STD.DEV
0.0	0.00	-
10.0	1.59	19%
25.0	5.00	8%
40.0	8.99	13%
100.0	28.03	12%
150.0	42.71	13%
200.0	59.82	11%
250.0	73.89	13%
600.0	177.03	19%

PROPYLENE

CONC.	READINGS	
(PPM)	AVE.	REL.STD.DEV
0.0	0.00	-
10.0	3.31	7%
25.0	8.40	7%
60.0	19.06	5%
90.0	30.19	4%
175.0	57.31	4%
250.0	94.54	3%
500.0	185.47	8%
1000.0	451.53	8%

ACRYLONITRILE

CONC.	READINGS	
(PPM)	AVE.	REL.STD.DEV
0.0	0.00	-
3.3	2.26	3%
5.4	3.73	3%
10.8	6.87	4%
27.2	16.88	3%
54.5	33.59	1%
81.5	52.62	1%
109.0	66.68	1%
326.6	204.27	7%

Conc.-concentration
Ave.-average
Rel. Std. Dev.-Relative standard deviation

TABLE 3

INSTRUMENT-TO-INSTRUMENT VARIABILITY - HNU RESULTS

1,3-BUTADIENE

CONC.	READINGS	
(PPM)	AVE.	REL.STD.DEV
0.0	0.00	-
15.0	8.98	11%
25.0	18.00	2%
100.0	67.00	2%
150.0	95.00	2%
200.0	126.00	1%
250.0	153.00	1%
500.0	255.00	4%
1000.0	340.00	8%
2000.0	460.00	11%

ACETIC ACID

CONC.	READINGS	
(PPM)	AVE.	REL.STD.DEV
0.0	0.00	-
20.0	0.52	83%
40.0	0.72	72%
100.0	2.46	26%
200.0	6.24	14%
300.0	9.35	8%
400.0	12.93	6%

DIMETHYL ETHER

CONC.	READINGS	
(PPM)	AVE.	REL.STD.DEV
0.0	0.00	-
10.0	2.37	10%
40.0	8.69	11%
150.0	29.62	8%
300.0	54.56	7%
450.0	83.70	6%
600.0	103.20	5%
900.0	133.34	6%
2000.0	229.64	5%

MONOMETHYL AMINE

CONC.	READINGS	
(PPM)	AVE.	REL.STD.DEV
0.0	0.0	-
10.0	0.6	125%
25.0	1.7	128%
40.0	6.1	38%
100.0	26.1	22%
150.0	39.6	9%
200.0	59.6	10%
250.0	69.9	10%
600.0	179.9	6%

PROPYLENE

CONC.	READINGS	
(PPM)	AVE.	REL.STD.DEV
0.0	0.00	-
10.0	4.27	3%
25.0	9.67	5%
60.0	24.43	6%
90.0	33.31	7%
175.0	62.70	4%
250.0	89.83	4%
500.0	149.08	3%
1000.0	256.71	3%

BENZENE

CONC.	READINGS	
(PPM)	AVE.	REL.STD.DEV
0.0	0.00	-
5.0	5.66	5%
15.0	16.24	3%
39.0	39.41	3%
51.0	52.62	1%
152.0	141.26	3%
203.0	186.47	3%
355.0	288.27	2%

TABLE 4

OVA GC MODE - Retention times on A 10% 1,2,3 Tris-(2-cyanoethoxy) propane-on-Anakrom C22A, AW, 60/80 mesh column at 0°C.

COMPOUND	RETENTION TIMES (minutes)					
	10 ppm	30 ppm	100 ppm	Average	Literature Value (5)	% of Lit. Value
Dichloroethane	0.83	0.85	0.74	0.81	1.13	71%
Benzene	1.45	1.47	1.35	1.42	1.72	83%
Methyl Ethyl Ketone	2.6	2.73	2.46	2.60	3.50	74%
Toluene	3.35	3.45	3.2	3.33	4.50	74%
Methyl Isobutyl Ketone	6.57	6.84	6.26	6.56	7.50	87%

OVA GC MODE - Retention times on a 10% OV-101 on Anakrom Q, 60/80 mesh column at 0 C.

COMPOUND	RETENTION TIMES (minutes)					
	10 ppm	30 ppm	100 ppm	Average	Literature Value (5)	% of Lit. Value
Dichloroethane	0.31	0.32	0.24	0.29	0.48	60%
Benzene	0.91	-	0.83	0.87	1.32	66%
Methyl Ethyl Ketone	-	0.59	0.44	0.52	0.83	63%
Toluene	2.79	2.83	2.48	2.70	4.08	66%
Methyl Isobutyl Ketone	2.16	2.27	1.95	2.13	3.25	65%

% of Lit. Value-percentage of literature value

TABLE 5

OVA RESPONSE FITTING PARAMETERS

$F(I) = A + B \times X$

PRIORITY SUBSTANCE	X1,X10 RANGES			X100 RANGE		
	FITTING PARAMETERS		CORRELATION COEFFICIENT	FITTING PARAMETERS		CORRELATION COEFFICIENT
	A	B	r	A	B	r
ACETIC ACID	0.2184	-0.0787	0.9996			
ACETIC ANHYDRIDE	0.6978	-0.4034	0.9994			
ACETONE	0.5088	0.2928	0.9998	0.5391	-6.8636	0.9979
ACETYLENE	1.7434	-5.1937	0.9887	1.6976	-7.1495	0.9948
ACRYLONITRILE	0.6203	0.2054	0.9999	0.6263	0.0000	1.0000
BENZENE	1.5739	-0.2588	0.9992	1.7394	-15.1051	0.9956
1,3-BUTADIENE	0.3579	-1.4339	0.9987	0.4881	-27.1148	0.9925
BUTANOL	0.3946	-0.4104	0.9998	0.5335	-20.0039	0.9882
BUTYLENE	0.4212	-0.5071	0.9998	0.5752	-19.3517	0.9933
n-BUTYRALDEHYDE	0.3612	-0.4926	0.9987			
CARBON TETRACHLORIDE	0.0593	0.1050	1.0000			
CHLORODIFLUOROMETHANE	0.5776	-0.1060	0.9998			
CHLOROFORM	0.5079	0.3133	0.9994	0.4588	2.1561	0.9987
CHLOROTRIFLUOROMETHANE	0.1217	0.1715	0.9997	0.1206	1.9829	0.9991
CUMENE	1.4061	0.3948	0.9994	1.6464	-17.7626	0.9968
CYCLOHEXANE	0.6555	-0.3300	0.9988	0.8777	-32.6652	0.9895
1,2-DIBROMOETHANE	0.5813	0.0530	0.9996	0.7385	-17.4187	0.9961
1,2-DICHLOROBENZENE	1.0421	-0.3107	0.9997	1.9737	-6.0023	0.9996
1,2-DICHLOROETHANE	0.0200	0.7009	0.9996	0.0051	-0.0204	0.9995
DICHLOROFLUOROMETHANE	0.6597	-1.9797	0.9923			
DICHLORODIFLUOROMETHANE	0.1015	-0.0200	0.9991	0.0960	-1.7592	0.9990
DIMETHYL ETHER	0.1501	-1.0000	0.9981	0.1671	-0.7579	0.9932
DIMETHYLAMINE	0.4029	-2.0773	0.9954	0.4200	-5.1142	0.9972
ETHANOL	0.2307	-0.1035	0.9998	0.3067	-21.6006	0.9941
ETHYL BENZENE	1.2010	0.1019	0.9999	1.6013	-33.4904	0.9920
2-ETHYL HEXANOL	0.7302	-0.5402	0.9998			
ETHYLENE	0.4207	-0.2357	0.9974	0.4029	-0.4520	0.9943
ETHYLENE OXIDE	0.4439	-1.1942	0.9975	0.4759	-10.0567	0.9917
FORMALDEHYDE(37% in Methanol)	0.0201	0.5039	0.9967			
n-HEXANE	0.6959	-0.4579	0.9982	0.9435	-32.7061	0.9869
ISOPROPANOL	0.5011	0.0310	0.9990	0.7202	-19.1790	0.9963
METHANOL	0.1064	-0.2471	0.9992			
METHYL ETHYL KETONE	0.5951	0.3357	0.9992	0.6912	-14.5212	0.9960
METHYL ISOBUTYL KETONE	0.7021	-0.5790	0.9994	0.0127	-2.0096	0.9995
METHYLENE CHLORIDE	0.0270	0.3999	0.9993	0.7007	5.5690	0.9993
METHYL METHACRYLATE	0.5567	0.0307	0.9995	0.6006	-17.0140	0.9973
MONOMETHYLAMINE	0.3016	-1.6120	0.9987	0.2950	0.0000	1.0000
MORPHOLINE	0.4560	-0.0104	0.9995	0.6543	-23.9602	0.9966

TABLE 5 (Continued)

OVA RESPONSE FITTING PARAMETERS

$F(I) = A + B \times I$

PRIORITY SUBSTANCE	X1,X10 RANGES			X100 RANGE		
	FITTING PARAMETERS		CORRELATION COEFFICIENT	FITTING PARAMETERS		CORRELATION COEFFICIENT
	A	B	r	A	B	r
PROPYLENE	0.3669	-1.5690	0.9922	0.4515	-13.4299	0.9895
PROPYLENE GLYCOL	0.1639	0.1315	0.9984			
PROPYLENE OXIDE	0.5764	0.1179	1.0000	0.6138	-6.0265	0.9995
STYRENE	0.9782	-0.0749	0.9997	1.4288	-41.6275	0.9844
TETRACHLORDETHYLENE	0.5991	0.9815	0.9963	0.6443	5.0216	0.9977
TOLUENE	1.2882	-0.5222	0.9998	1.3778	-2.3573	0.9927
TRICHLORDETHANE	0.9791	0.5225	0.9995	0.6443	5.0216	0.9977
TRICHLORDFLUORDMETHANE	0.0557	0.7048	0.9985			
TRIMETHYLAMINE	0.4187	-2.3314	0.9857	0.4700	0.0000	1.0000
TURPENTINE	0.9847	0.3811	0.9997	1.3446	-23.7188	0.9938
VINYL ACETATE	0.4875	-0.0917	0.9987	0.4673	2.2964	0.9995
VINYL CHLORIDE	0.4657	-0.1202	0.9996			
XYLENE	1.1341	0.2960	0.9998	1.4848	-27.3850	0.9935

TABLE 6

HMU RESPONSE CURVE FITTING PARAMETERS

$F(X)=A+B(1-EXP(-X/C))$

PRIORITY SUBSTANCE	FITTING PARAMETERS			CORRELATION COEFFICIENT
	A	B	C	r
ACETONE	2.1220	464.2195	938.9865	0.9999
BENZENE	0.1433	677.9731	648.6484	0.9999
1,3-BUTADIENE	3.8386	488.0293	563.8748	0.9946
1-BUTANOL	0.2467	85.7665	987.1158	0.9996
BUTYLENE	1.0087	399.4236	924.5812	0.9993
n-BUTYRALDEHYDE	0.4160	96.7335	270.4166	0.9996
CARBON DISULPHIDE	0.0160	314.3888	664.8577	0.9997
CUMENE	2.1650	457.9764	483.1959	0.9998
CYCLOHEXANE	0.1944	216.2967	542.0606	0.9998
1,2-DIBROMOETHANE	0.1064	153.6481	589.8098	0.9996
1,2-DICHLOROBENZENE	2.3334	510.1214	382.3488	0.9981
DIMETHYL ETHER	0.8286	318.1913	1587.6008	0.9988
DIMETHYLAMINE	-7.0891	524.9422	1216.7178	0.9933
ETHANOL	-0.0508	58.7764	1468.6454	0.9995
ETHYL BENZENE	1.2411	510.9745	416.9486	0.9999
2-ETHYL HEXANOL	0.0953	89.0229	154.4810	0.9995
n-HEXANE	0.0761	72.6101	611.0085	0.9999
HYDROGEN SULPHIDE	-0.0480	177.5653	963.7222	0.9986
ISOPROPANOL	0.2135	68.5711	722.3693	0.9998
METHYL ETHYL KETONE	0.6237	401.6352	642.6888	0.9993
METHYL ISOBUTYL KETONE	0.0483	309.8722	456.0838	0.9999
METHYL METHACRYLATE	0.6232	273.7620	646.8320	0.9996
METHYLENE CHLORIDE	0.0419	12.5719	943.3205	0.9999
MONOMETHYLAMINE	-4.2418	6263.2770	20251.5720	0.9982
MORPHOLINE	0.3151	499.1512	744.6492	0.9999
PROPYLENE	1.2884	433.5369	1132.0980	0.9991
PROPYLENE OXIDE	0.0000	78.2381	934.9532	1.0000
STYRENE	2.0951	603.6671	420.5616	0.9997
TETRACHLOROETHYLENE	-0.6696	531.1292	581.3654	0.9985
TOLUENE	-0.5089	650.3257	568.4999	0.9999
TURPENTINE	0.3263	428.4125	248.8326	0.9998
VINYL ACETATE	0.2013	317.0234	586.2484	0.9997
o-XYLENE	2.5551	536.2982	392.7333	0.9998

TABLE 6 (Continued)

HNU RESPONSE FITTING PARAMETERS

PRIORITY SUBSTANCE	F(X) = A + B•X		
	FITTING PARAMETERS		CORRELATION COEFFICIENT
	A	B	r
2-ETHYL HEXANOL	0.4158	1.6882	0.9988
ACETIC ACID	0.0327	-0.3553	0.9972
ACETIC ANHYDRIDE	0.2431	0.2141	0.9972
AMMONIA	0.0358	-0.2596	0.9983
MONOMETHYLAMINE	0.3049	-3.9985	0.9984
PROPYLENE GLYCOL	0.1249	0.5375	0.9862
TRIMETHYLAMINE	0.3500	0.0656	0.9965
VINYL CHLORIDE	0.3378	0.3525	0.9992

TABLE 7

SAMPLE RS/1 TABLE

Chemical Code - see Directory Listing

Information Code-see Directory Listing

AAA_OS1

Concentration ppm	'9507'	'9509'	'9513'	Code No. of Individual Instruments
0.0	0.0	0.0	0.0	Direct OVA Readings for AAA
10.9	6.5	8.6	6.9	
21.8	11.0	16.0	12.5	
54.5	24.5	35.0	28.5	
108.8	50.0	70.5	57.0	
272.6	115.0	175.0	145.0	
543.8	250.0	365.0	315.0	
1090.3	540.0	780.0	685.0	
1635.4	845.0	1000.0	1000.0	
0.0	0.0	0.0	0.0	Direct OVA Readings for Methane
8.4	8.7	10.0	8.7	
93.0	87.5	105.0	97.0	
498.0	480.0	600.0	588.0	

Information Code-OVA Readings Modified with Correction Coefficients
(e.g. Primary calibrant standard-methane 93 ppm-
for OVA 9513 reads 90:
each direct OVA reading for OVA 9513 is
modified with correction coefficient 93/90)
Range 1X,10X.

AAA_OS1

ppm	'9507'	'9509'	'9513'	AVERAGE
0.0	0.000000	0.000000	0.000000	0.000000
10.9	6.908571	7.617143	6.615464	7.047059
21.8	11.691429	14.171429	11.984836	12.615798
54.5	26.040000	31.000000	27.324742	28.121581
108.8	53.142857	62.442857	54.649485	56.745066

The Equation of the Best Fit is:

0.513139x +0.790414

TABLE 7 (continued)

Information Code-OVA Readings Modified with Correction Coefficients
Range 100X.

AAA_0S2

PPm	'9507'	'9509'	'9513'	AVERAGE
0.0	0.000000	0.000000	0.000000	0.000000
272.6	122.394171	155.210000	139.208969	138.937714
543.8	266.074286	323.723714	302.419485	297.405828
1090.3	574.720457	691.793143	657.642371	641.385324
1635.4	899.331086	886.914286	960.061856	915.435742

The Equation of the Best Fit is:

0.570765*X -5.708596

TABLE 7 (continued)

Information Code_HNU

AAA_H

SPAN 9.9 DATA

PPM	'82764'	'81470'	'82756'	'82757'	Code No. of Individual Instruments
0.0	0.0	0.0	0.0	0.0	
10.9	6.2	6.4	6.2	7.0	
21.8	10.7	11.8	11.2	12.4	
54.5	24.0	27.0	26.0	27.0	
109.0	46.0	52.0	49.0	51.0	
272.0	99.0	112.0	108.0	109.0	Direct HNU Readings for AAA
545.0	171.0	178.0	190.0	189.0	
1089.0	280.0	270.0	305.0	305.0	
1634.0	335.0	315.0	360.0	380.0	
0.0	0.0	0.0	0.0	0.0	
10.0	9.9	10.3	10.4	11.2	
101.0	86.0	88.0	94.0	95.0	Direct HNU Readings for Benzene
508.0	330.0	310.0	360.0	380.0	

Information Code-HNU Readings Modified with Correction Coefficients
(e.g. Primary calibrant standard-benzene 101 ppm-reads 102:
for HNU 81428 each direct Hnu reading for HNU 81428 is modified with correction coefficient 101/102)

AAA_HS

PPM	'82764'	'81470'	'82756'	'82757'	AVERAGE
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
10.9	7.281395	7.345455	6.661702	7.442105	7.182664
21.8	12.566279	13.547170	12.034043	13.183158	12.831665
54.5	28.186047	30.998636	27.936170	28.705263	28.954029
109.0	54.123256	59.600000	52.648936	54.221053	55.143311
272.0	116.267442	128.545455	116.042553	115.884211	119.184915
545.0	200.825581	204.295455	204.148936	200.936842	202.551704
1089.0	328.837209	309.886364	327.412766	324.263158	322.674974
1634.0	393.430233	361.534091	386.808511	404.000000	386.443209

The Equation of the Best Fit:

2.258438+471.203741*(1-EXP((-X)/964.626083))

FIGURE 1

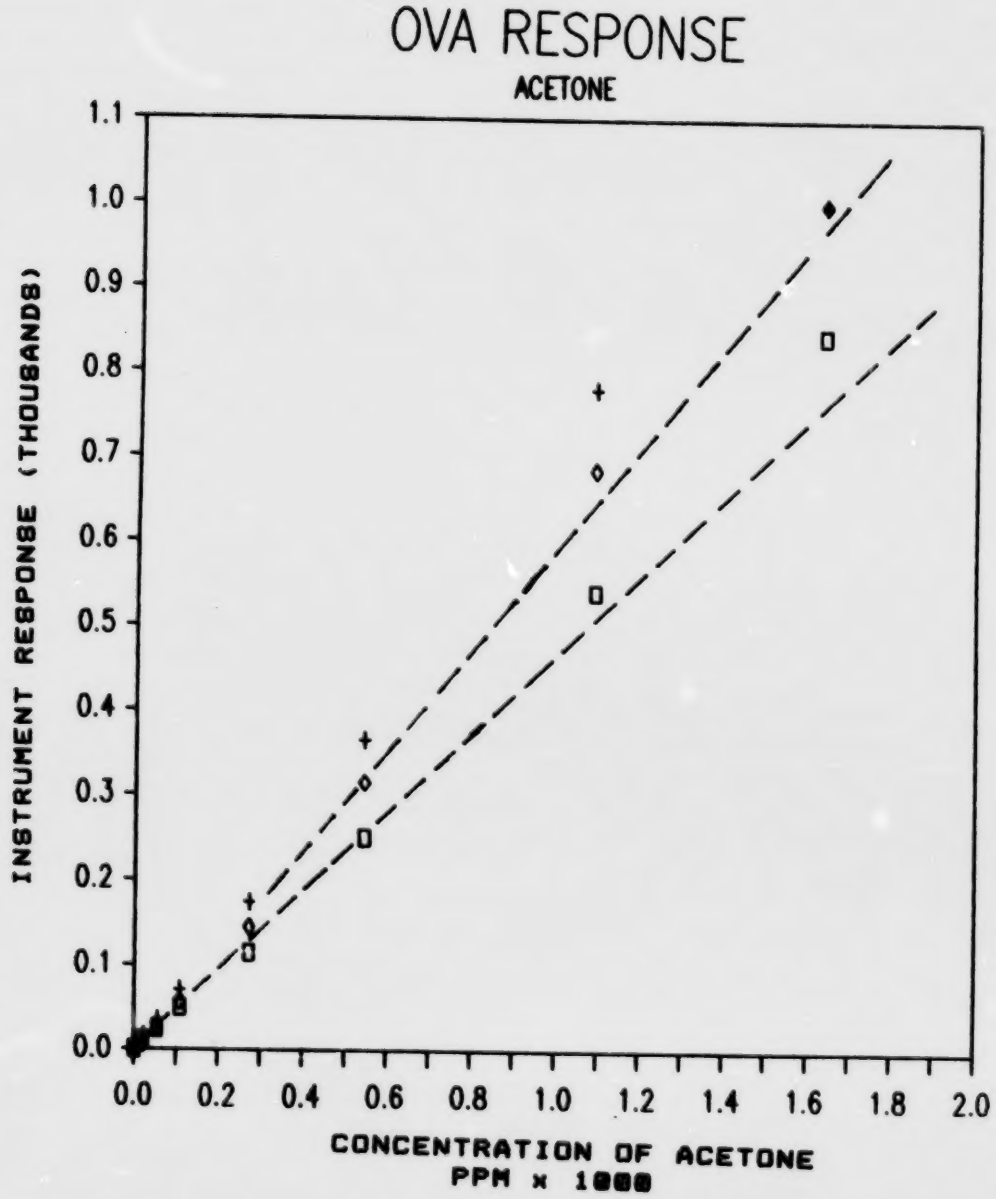

OVA RESPONSE
ACETONE
INSTRUMENT RESPONSE (THOUSANDS)
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0
CONCENTRATION OF ACETONE
PPM x 1000
OVA 9507
OVA 9513
OVA 9509

FIGURE 2

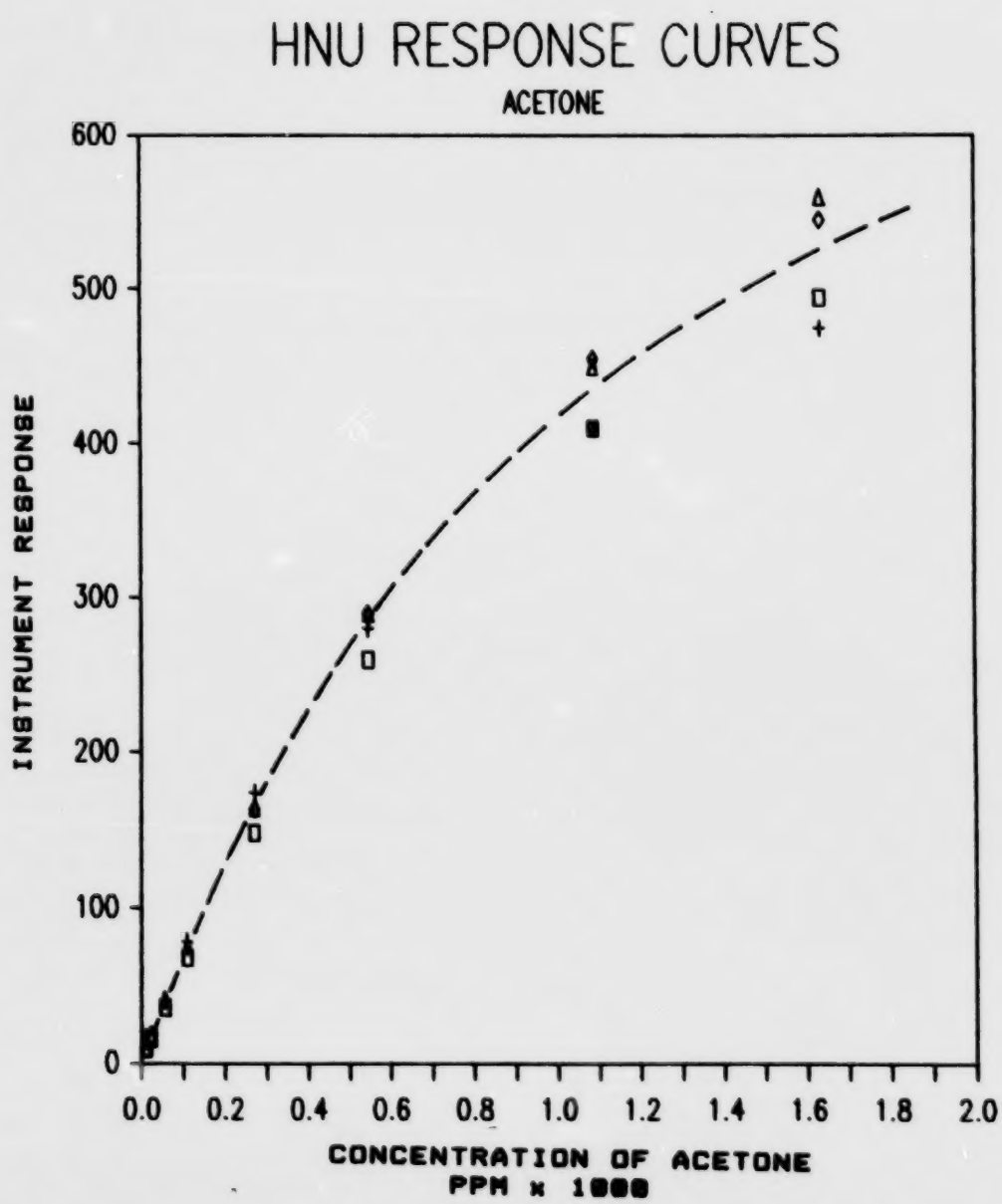
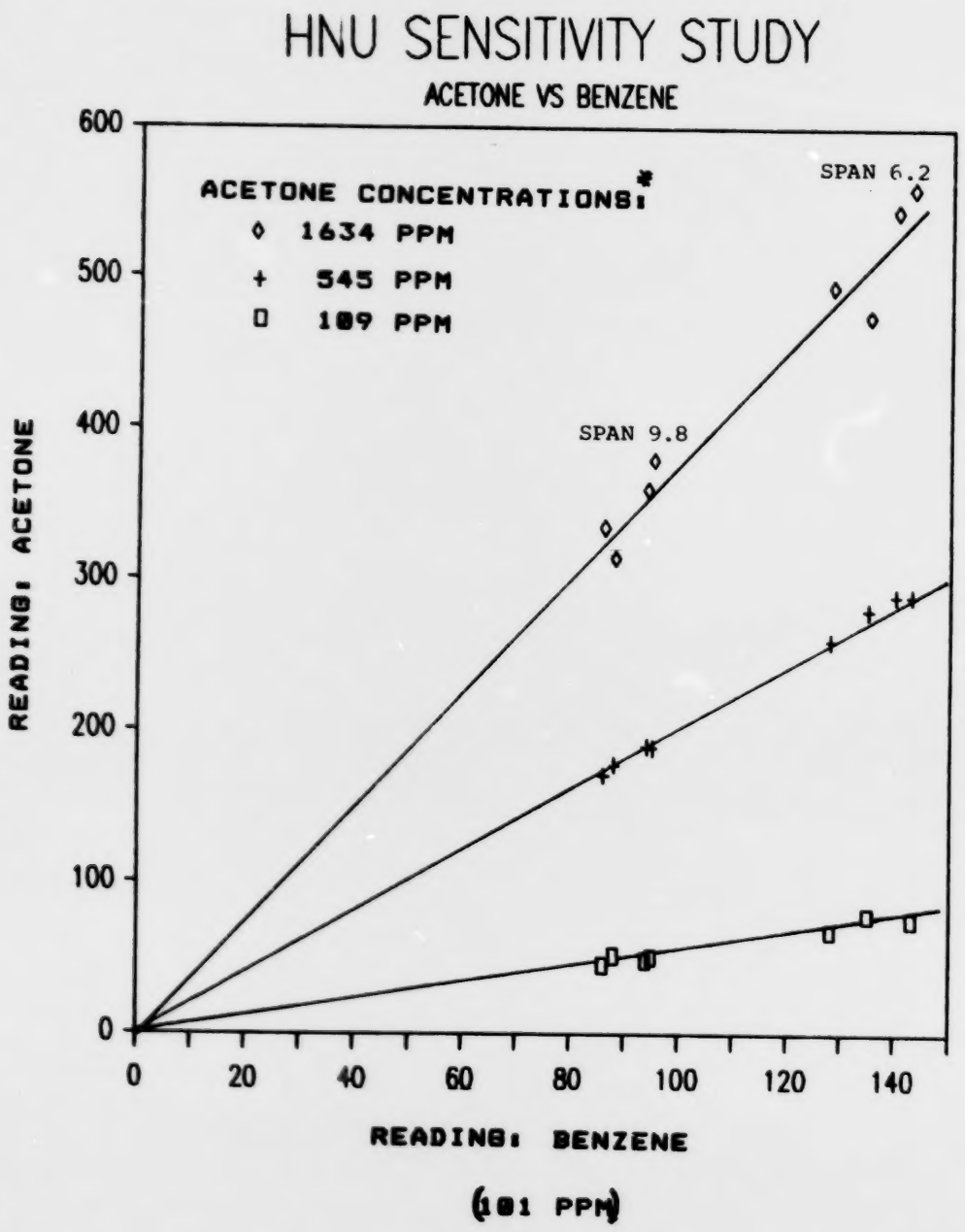

HNU RESPONSE CURVES
ACETONE
INSTRUMENT RESPONSE
600
500
400
300
200
100
0
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
CONCENTRATION OF ACETONE
PPM x 1000
Span 6.2
HNU 82764
HNU 81470
HNU 82756
HNU 82757

FIGURE 3



*Readings from four instruments - various concentrations of acetone

FIGURE 4

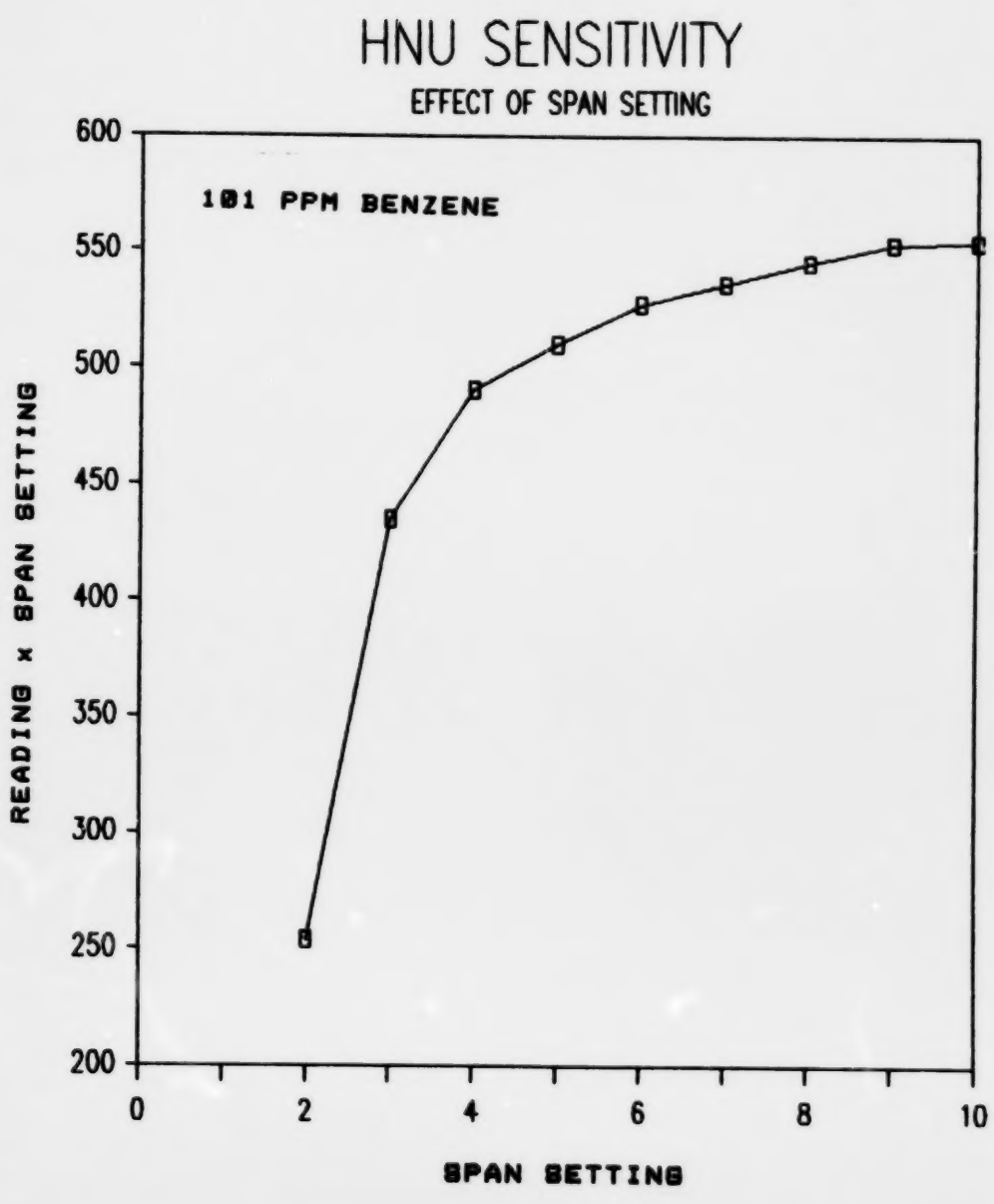

HNU SENSITIVITY
EFFECT OF SPAN SETTING
101 PPM BENZENE
READING x SPAN SETTING
SPAN SETTING
600
550
500
450
400
350
300
250
200
0
2
4
6
8
10

FIGURE 5

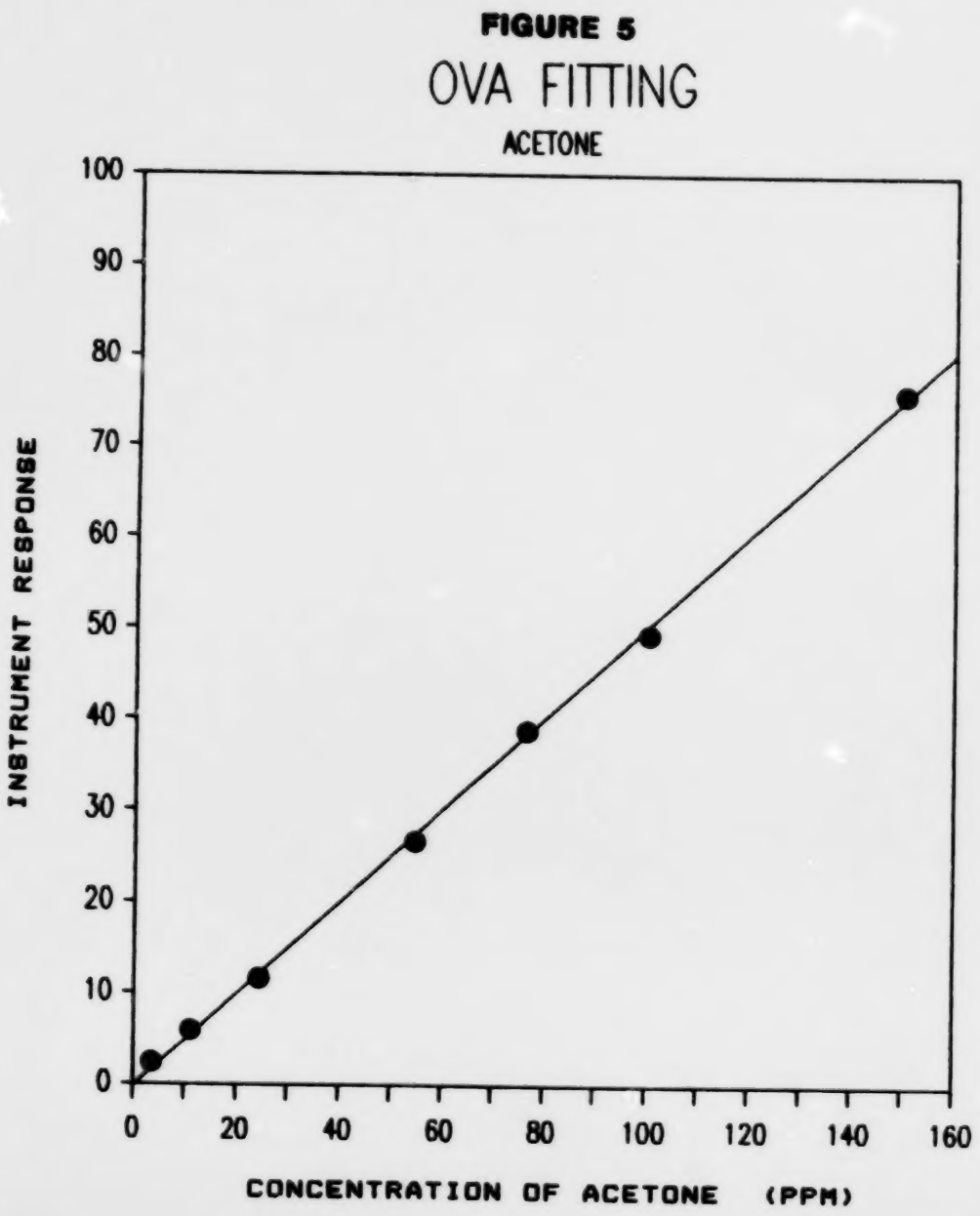

OVA FITTING
ACETONE
INSTRUMENT RESPONSE
100
90
80
70
60
50
40
30
20
10
0
0
20
40
60
80
100
120
140
160
CONCENTRATION OF ACETONE (PPM)

FIGURE 6

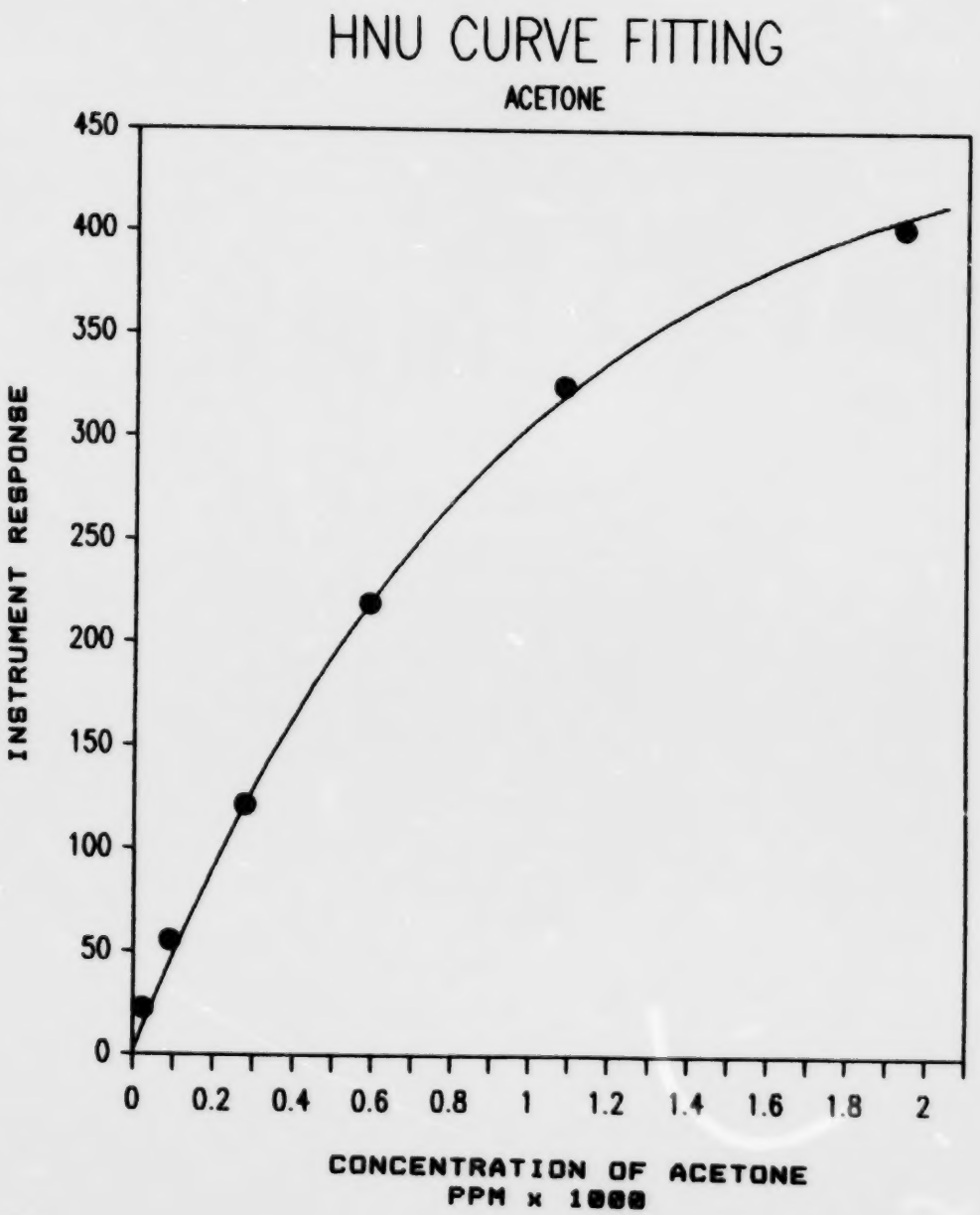
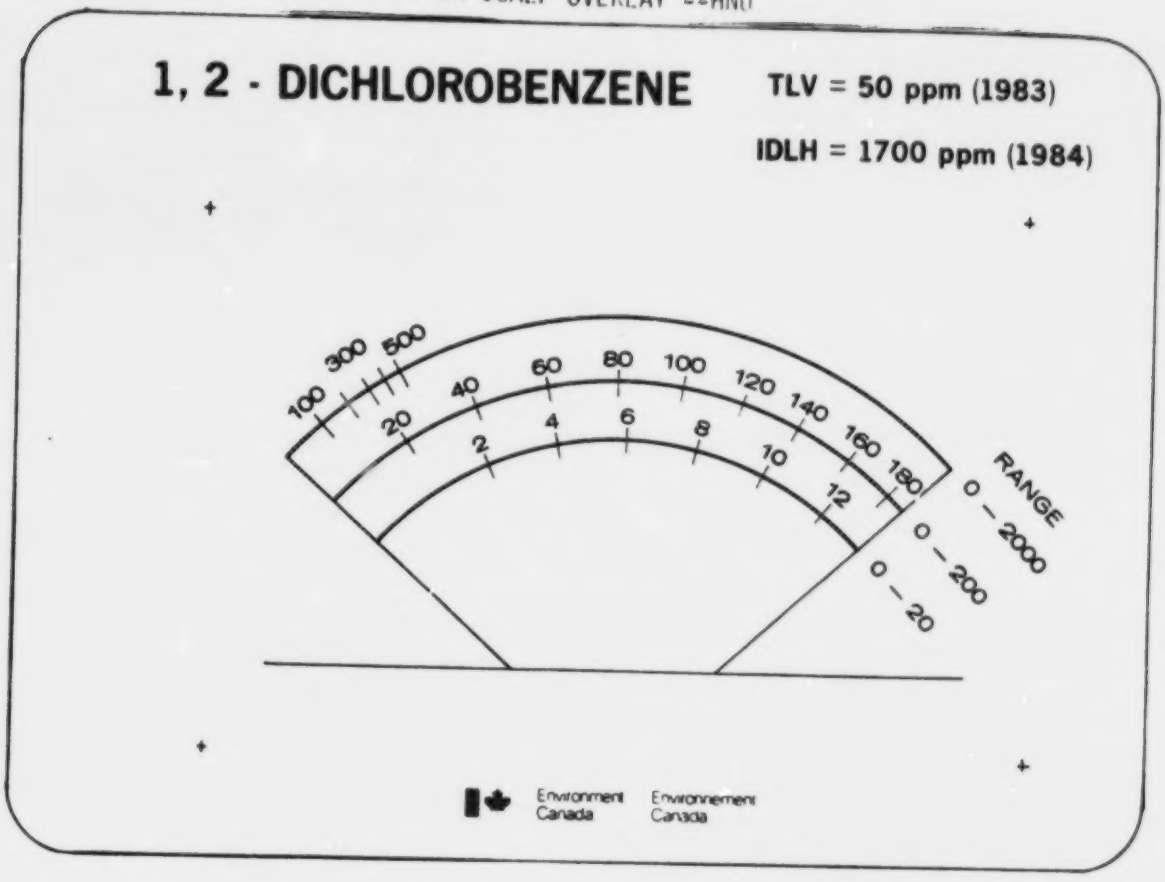

HNU CURVE FITTING
ACETONE
INSTRUMENT RESPONSE
450
400
350
300
250
200
150
100
50
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
CONCENTRATION OF ACETONE
PPM x 1000

FIGURE 7

METER SCALE OVERLAY --HNU



METER SCALE OVERLAY--OVA

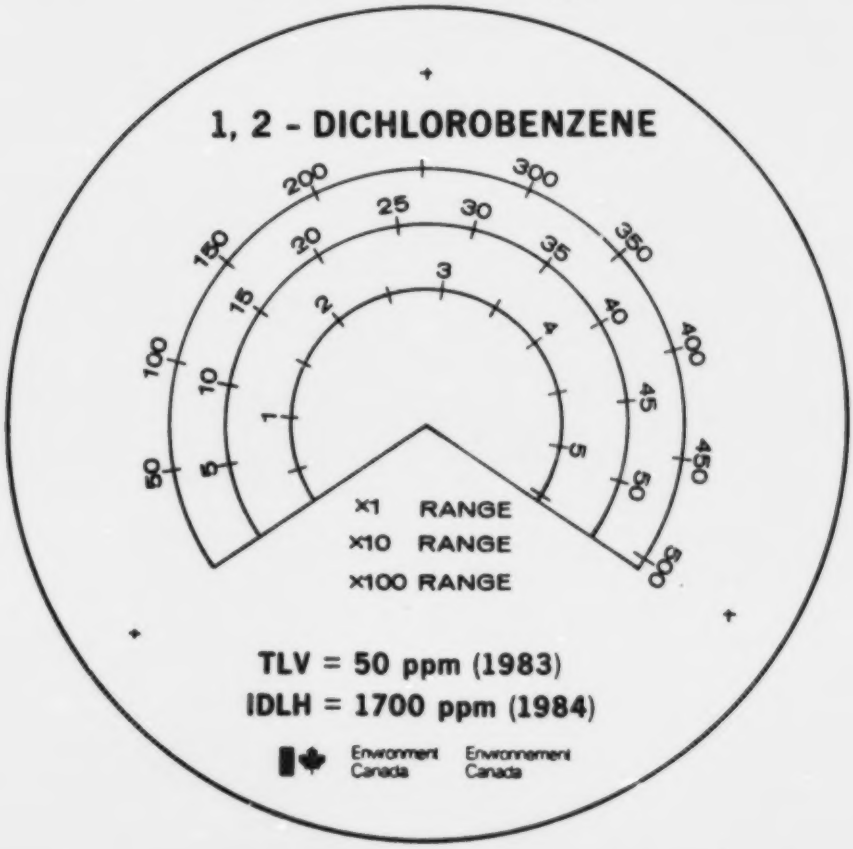


FIGURE 8

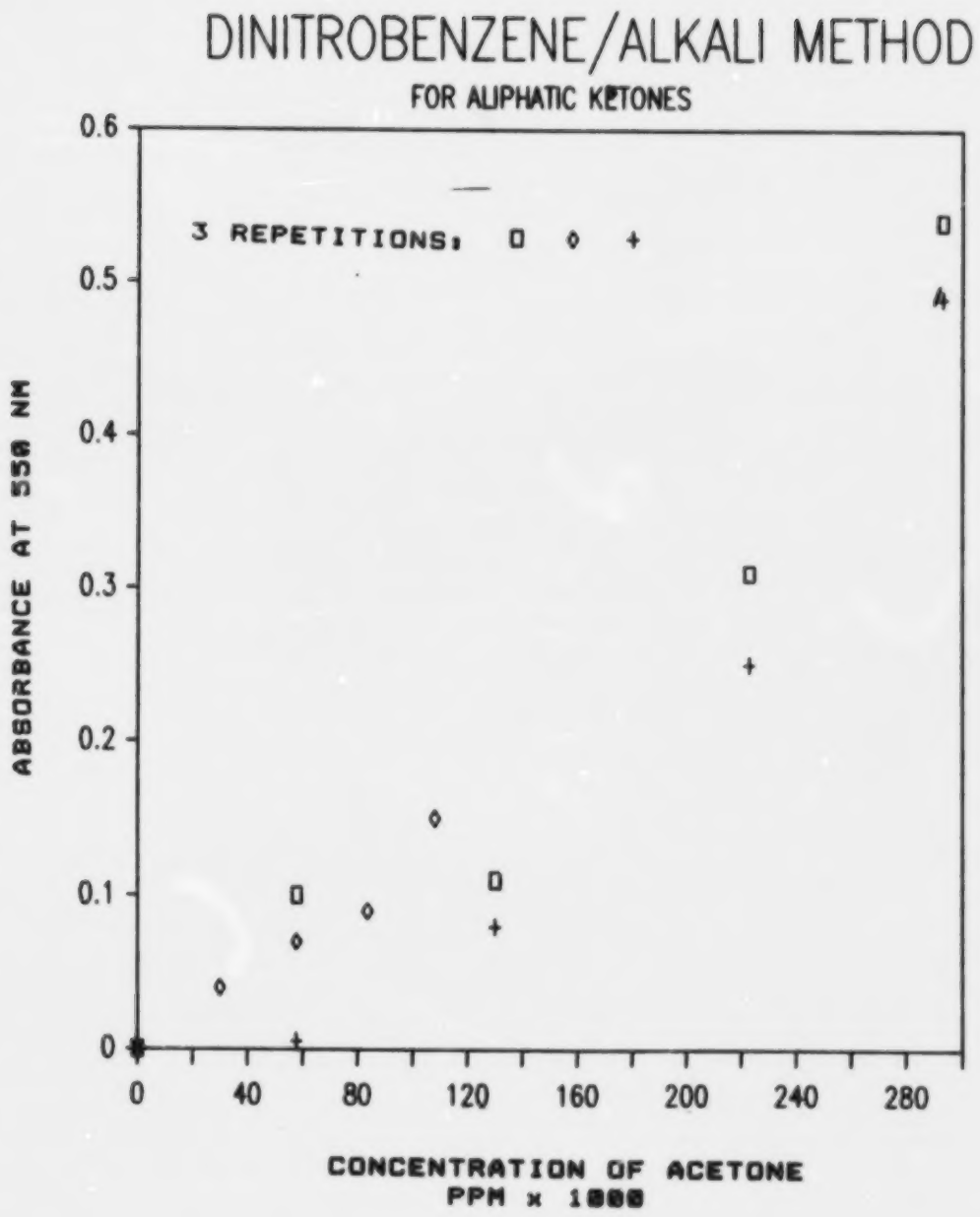

DINITROBENZENE/ALKALI METHOD
FOR ALIPHATIC KETONES
3 REPETITIONS:
ABSORBANCE AT 550 NM
0.6
0.5
0.4
0.3
0.2
0.1
0
0
40
80
120
160
200
240
280
CONCENTRATION OF ACETONE
PPM x 1000

FIGURE 9

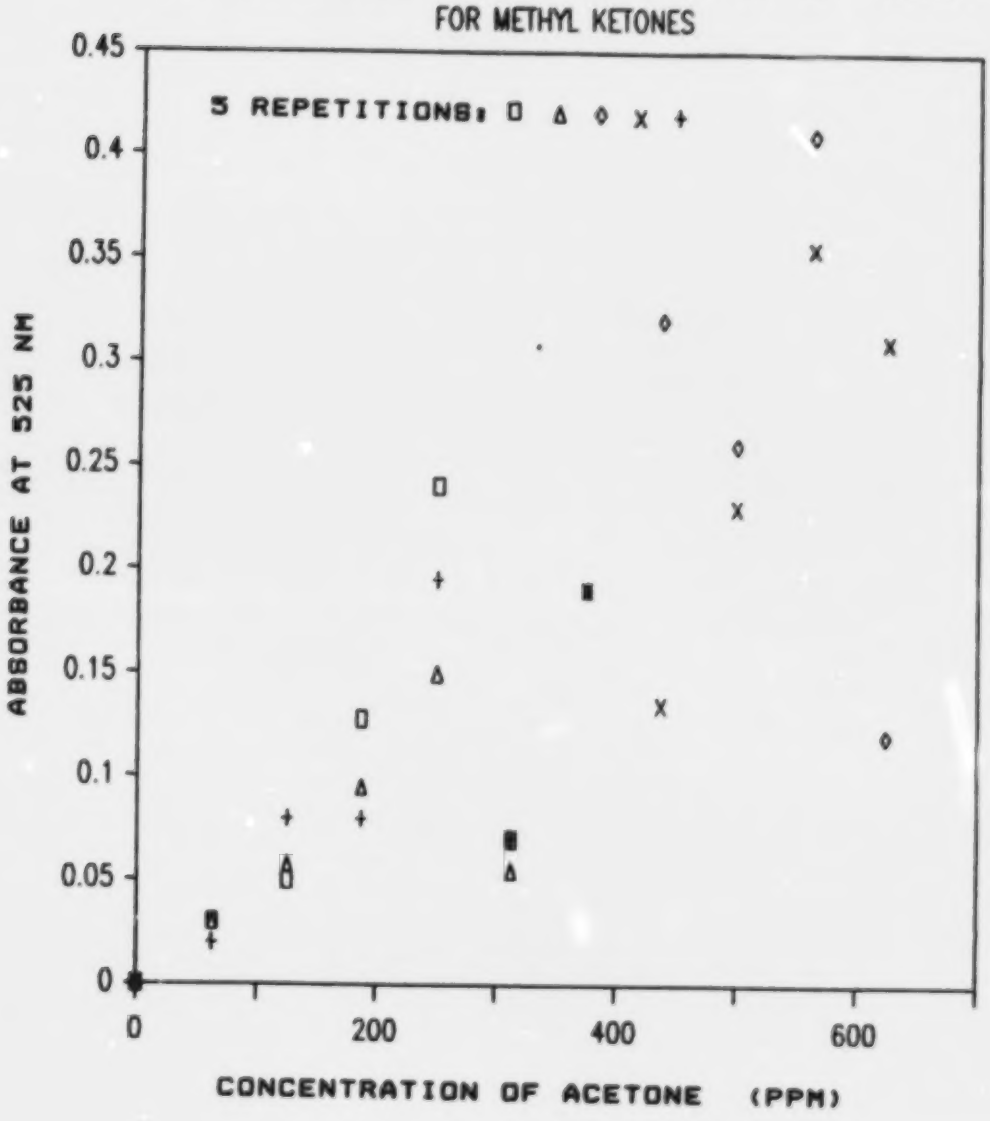

SODIUM NITROPRUSSIDE SPOT TEST
FOR METHYL KETONES
5 REPETITIONS:
ABSORBANCE AT 525 NM
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
0
200
400
600
CONCENTRATION OF ACETONE (PPM)

FIGURE 10

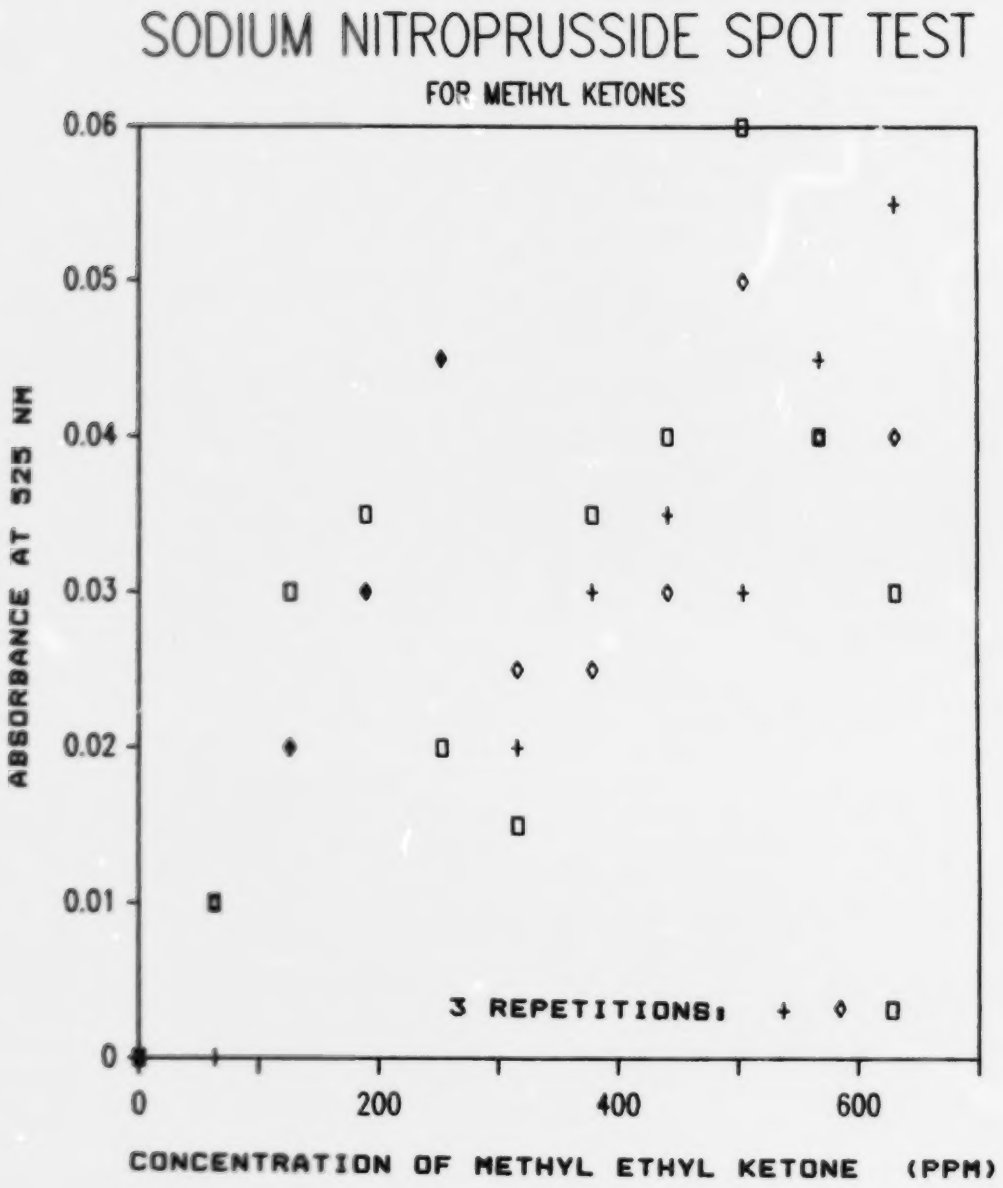

SODIUM NITROPRUSSIDE SPOT TEST
FOR METHYL KETONES
ABSORBANCE AT 525 NM
0.06
0.05
0.04
0.03
0.02
0.01
0
0
200
400
600
3 REPETITIONS:
CONCENTRATION OF METHYL ETHYL KETONE (PPM)

FIGURE 11

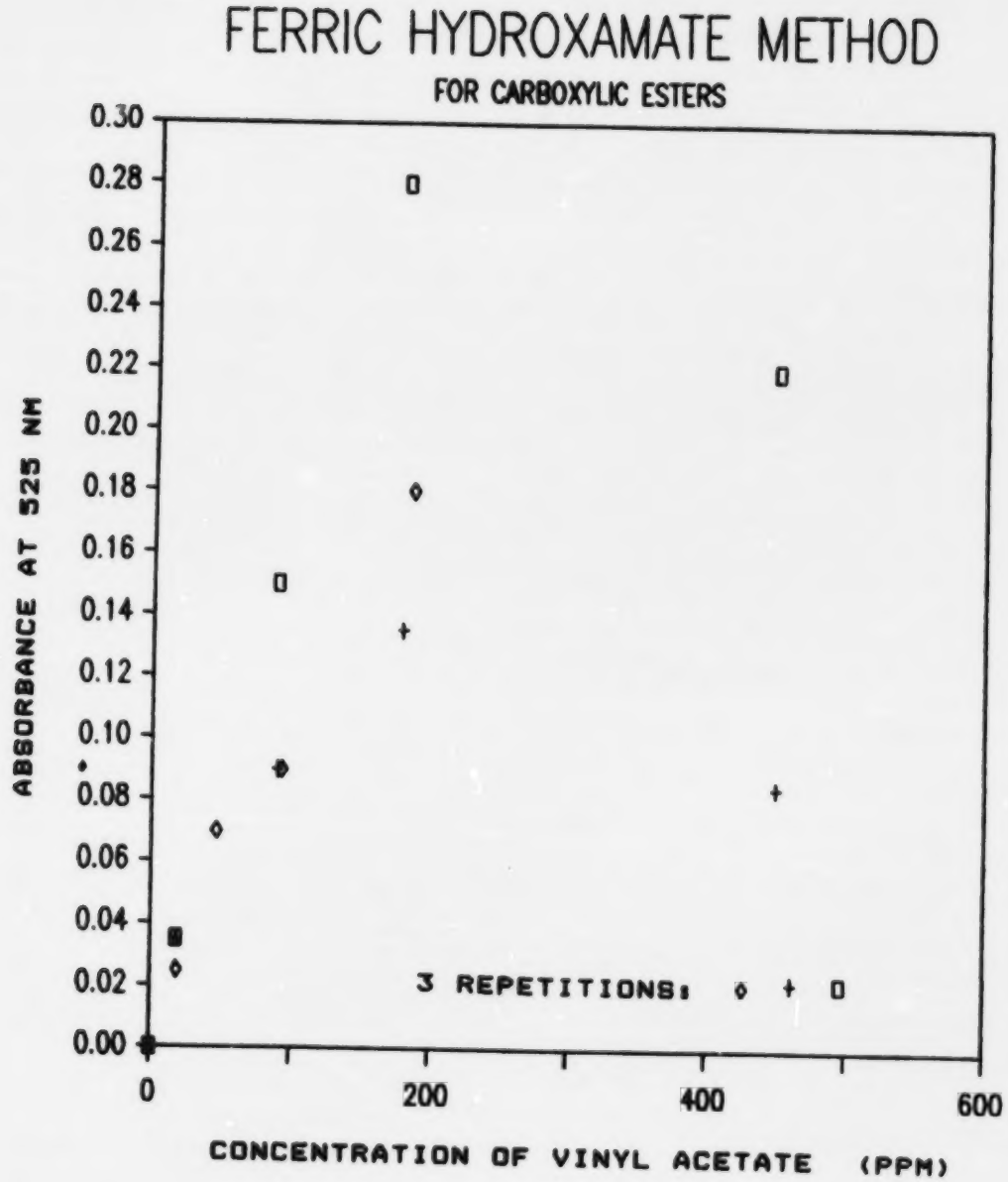

FERRIC HYDROXAMATE METHOD
FOR CARBOXYLIC ESTERS
ABSORBANCE AT 525 NM
0.30
0.28
0.26
0.24
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0
200
400
600
3 REPETITIONS:
CONCENTRATION OF VINYL ACETATE (PPM)

FIGURE 12

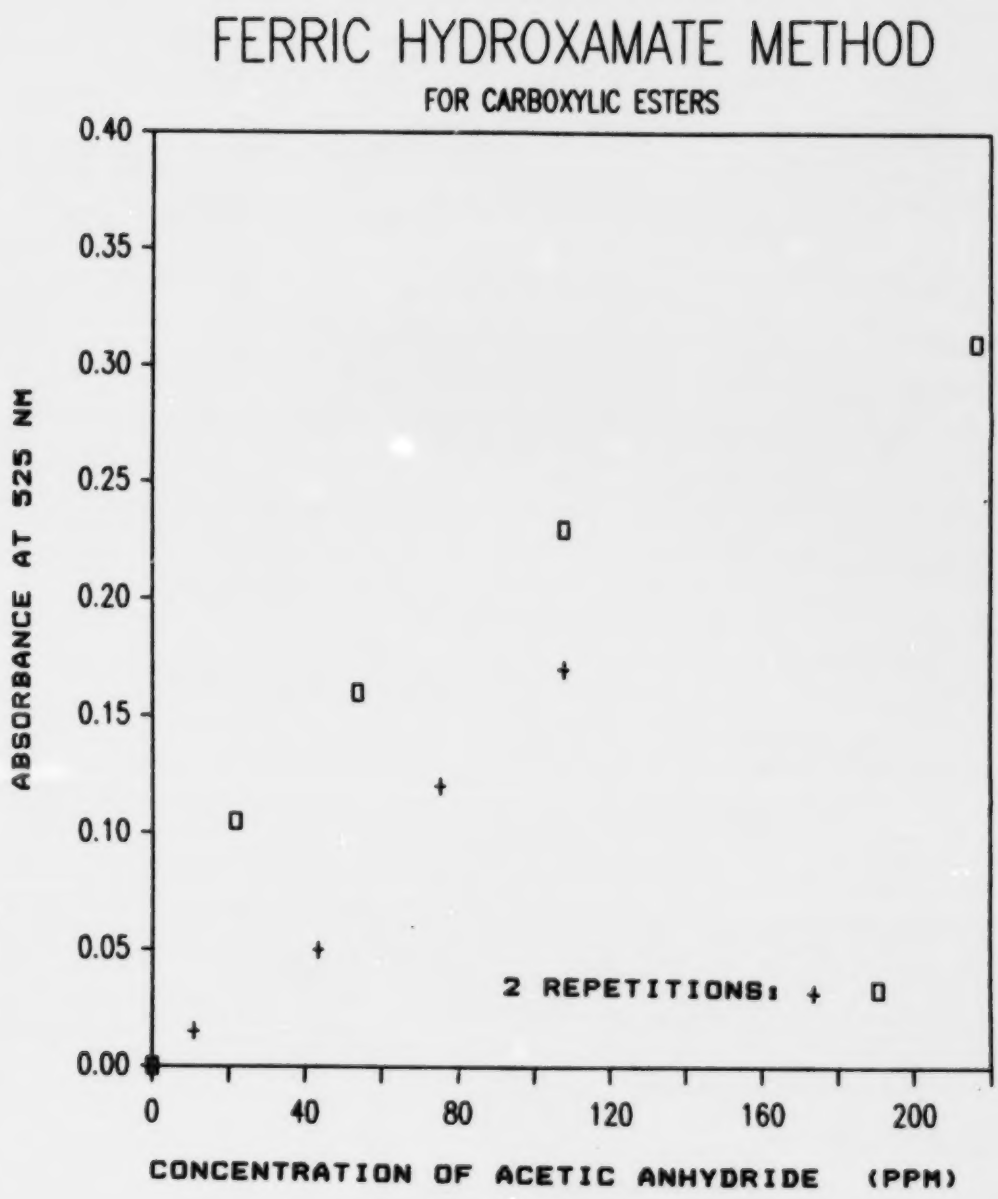

FERRIC HYDROXAMATE METHOD
FOR CARBOXYLIC ESTERS
ABSORBANCE AT 525 NM
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0
40
80
120
160
200
2 REPETITIONS: + □
CONCENTRATION OF ACETIC ANHYDRIDE (PPM)

FIGURE 13

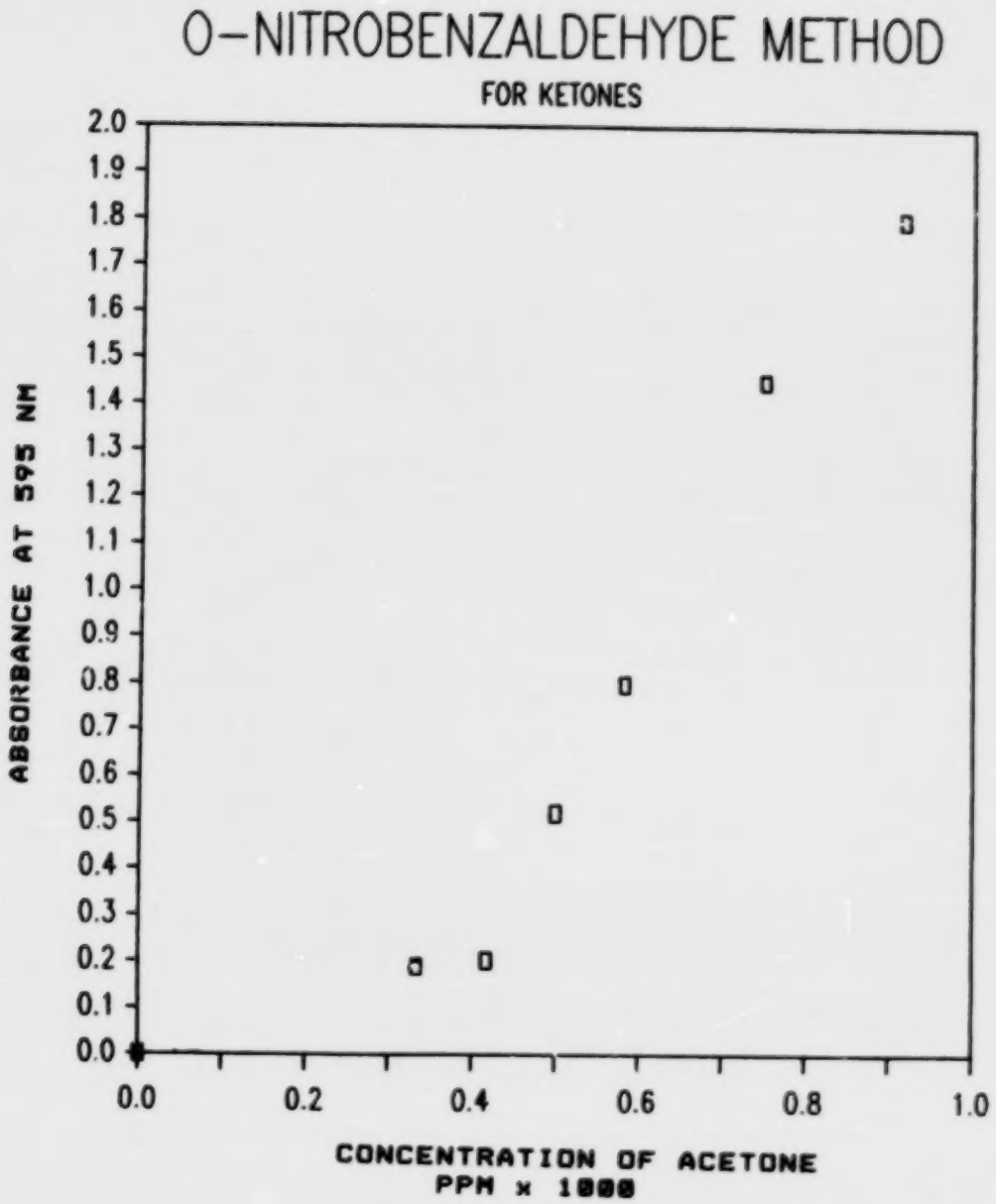

O-NITROBENZALDEHYDE METHOD
FOR KETONES
ABSORBANCE AT 595 NM
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.0
0.2
0.4
0.6
0.8
1.0
CONCENTRATION OF ACETONE
PPM x 1000

FIGURE 14

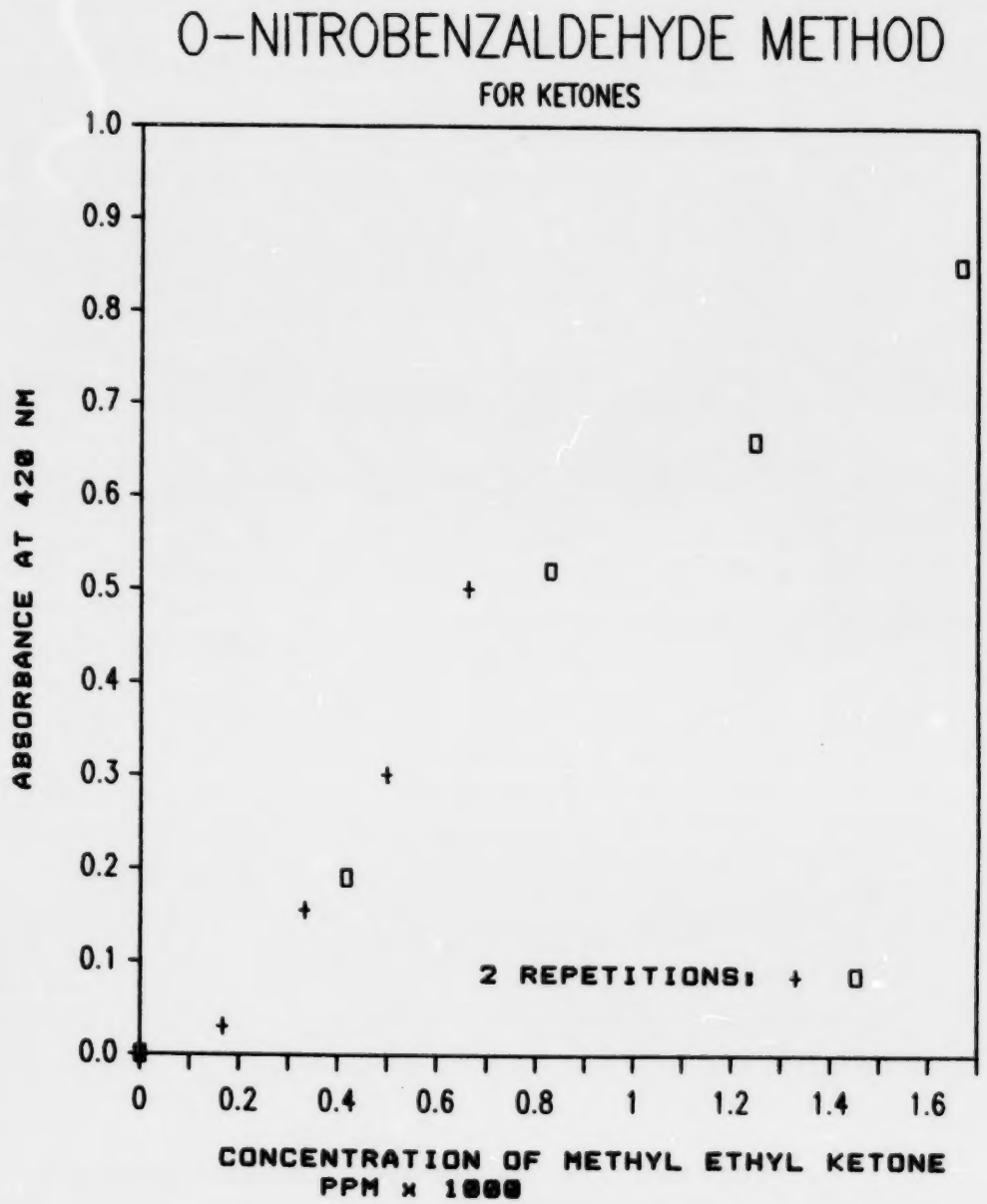
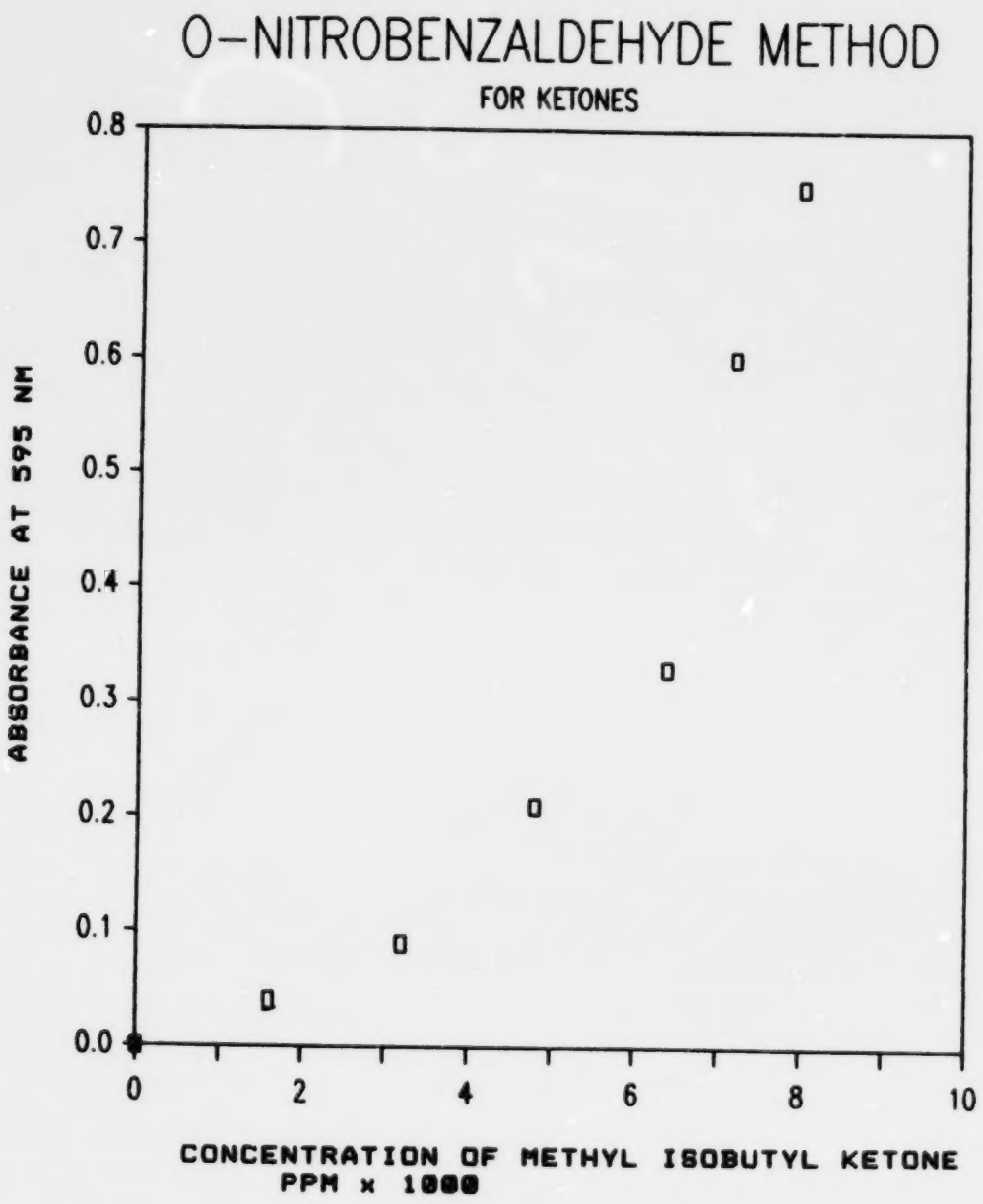

O-NITROBENZALDEHYDE METHOD
FOR KETONES
ABSORBANCE AT 420 NM
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
2 REPETITIONS: + □
CONCENTRATION OF METHYL ETHYL KETONE
PPM x 1000

FIGURE 15


O-NITROBENZALDEHYDE METHOD
FOR KETONES
ABSORBANCE AT 595 NM
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0
2
4
6
8
10
CONCENTRATION OF METHYL ISOBUTYL KETONE
PPM x 1000

APPENDIX A

DIRECTORY LISTING

Chemical Codes	
AAA	Illustrative Example
ACETAC	Acetic Acid
ACETAN	Acetic Anhydride
ACE*	Acetone
ACET	Acetylene
AC	Acrylonitrile
AM	Ammonia
BE	Benzene
BTD	Butadiene
BTN*	Butanol
BU	Butene
BTR	Butyraldehyde
CD	Carbon Disulphide
CT	Carbon Tetrachloride
CDFM	Chlorodifluoromethane
CH*	Chloroform
CTFM	Chlorotrifluoromethane
CU	Cumene
CY*	Cyclohexane
DBM	Dibromoethane
DCB	Dichlorobenzene
DCDFM	Dichlorodifluoromethane
DCE	Dichloroethane
DCFM	Dichlorofluoromethane
DMA*	Dimethylamine
DME	Dimethyl Ether
EOL	Ethanol

Information Codes

O - Direct OVA Readings

OSI - OVA Readings Modified with Correction Coefficients Range 1x, 10x

OS2 - OVA Readings Modified with Correction Coefficients Range 100x

H - Direct HNU Readings

HS - HNU Readings Modified with Correction Coefficients

Chemical Codes

E	Ethylene
EO	Ethylene Oxide
EB	Ethylbenzene
EH	Ethyl Hexanol
F	Formaldehyde
H *	Hexane
HS	Hydrogen Sulphide
I	Isopropanol
MOL	Methanol
MC *	Methylene Chloride
MEK *	Methyl Ethyl Ketone
MIK	Methyl Isobutyl Ketone
MM	Methyl Methacrylate
MMA	Monomethylamine
M	Morpholine
P	Propylene
PG	Propylene Glycol
PO	Propylene Oxide
S	Styrene
TCE	Tetrachloroethylene
TO	Toluene
TC	Trichloroethane
TCFM	Trichlorofluoromethane
TMA	Trimethylamine
TU	Turpentine
VA	Vinyl Acetate
VC *	Vinyl Chloride
X	Xylene

* Duplicated

Chemical Code - see Directory Listing

Information Code-see Directory Listing

AAA_OS1

Concentration

ppm	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
10.9	6.5	8.6	6.9
21.8	11.0	16.0	12.5
54.5	24.5	35.0	28.5
108.8	50.0	70.5	57.0
272.6	115.0	175.0	145.0
543.8	250.0	365.0	315.0
1090.3	540.0	780.0	685.0
1635.4	845.0	1000.0	1000.0
0.0	0.0	0.0	0.0
8.4	8.7	10.0	8.7
93.0	87.5	105.0	97.0
498.0	480.0	600.0	585.0

Code No. of Individual Instruments

Direct OVA Readings for AAA

Direct OVA Readings for Methane

Information Code-OVA Readings Modified with Correction Coefficients (e.g. Primary calibrant standard-methane 93 ppm- for OVA 9513 reads 90: each direct OVA reading for OVA 9513 is modified with correction coefficient 93/90) Range 1X,10X.

AAA_OS1

ppm	'9507'	'9509'	'9513'	AVERAGE
0.0	0.000000	0.000000	0.000000	0.000000
10.9	6.908571	7.617143	6.615464	7.047059
21.8	11.691429	14.171429	11.984536	12.615798
54.5	26.040000	31.000000	27.324742	28.121581
108.8	53.142857	62.442857	54.649485	56.745066

The Equation of the Best Fit is:

0.513193*A +0.790414

Information Code-OVA Readings Modified with Correction Coefficients
Range 100X.

AAA_OS2

PPm	'9507'	'9509'	'9513'	AVERAGE
0.0	0.000000	0.000000	0.000000	0.000000
272.6	122.394171	155.210000	139.208969	138.937714
543.8	266.074286	323.723714	302.419485	297.405828
1090.3	574.720457	691.793143	657.642371	641.385324
1635.4	899.331086	886.914286	960.061856	915.435742

The Equation of the Best Fit is:

0.570765*X -5.708696

Information Code_HNU

AAA_H

SPAN 9.9 DATA

PPM	'82764'	'81470'	'82756'	'82757'	Code No. of Individual Instruments
0.0	0.0	0.0	0.0	0.0	
10.9	6.2	6.4	6.2	7.0	
21.8	10.7	11.8	11.2	12.4	
54.5	24.0	27.0	26.0	27.0	
109.0	46.0	52.0	49.0	51.0	
272.0	99.0	112.0	108.0	109.0	Direct HNU Readings for AAA
545.0	171.0	178.0	190.0	189.0	
1089.0	280.0	270.0	305.0	305.0	
1634.0	335.0	315.0	360.0	380.0	
0.0	0.0	0.0	0.0	0.0	
10.0	9.9	10.3	10.4	11.2	
101.0	86.0	88.0	94.0	95.0	Direct HNU Readings for
508.0	330.0	310.0	360.0	380.0	Benzene

Information Code-HNU Readings Modified with Correction Coefficients
(e.g. Primary calibrant standard-Benzene 101 ppm-
for HNU 81428 reads 102:
each direct Hnu reading for HNU 81428 is
modified with correction coefficient 101/102)

AAA_HS

PPM	'82764'	'81470'	'82756'	'82757'	AVERAGE
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
10.9	7.281396	7.345455	6.661[illegible]	7.442105	7.18[illegible]
21.8	12.566038	13.[illegible]	12.034043	13.183158	12.831669
54.5	28.196042	30.[illegible]	27.[illegible]	28.[illegible]	28.[illegible]
109.0	54.[illegible]	59.[illegible]	52.648936	54.221[illegible]	55.143[illegible]
272.0	116.267442	128.545455	116.[illegible]	115.884211	119.184915
545.0	200.825581	204.295455	204.148936	200.936842	202.551704
1089.0	328.837209	309.886364	322.[illegible]	324.[illegible]	322.[illegible]
1634.0	393.430233	361.534091	386.808511	404.000000	386.[illegible]

The Equation of the Best Fit:

2.258438+471.[illegible]341*(1-EXP((-X)/964.626083))

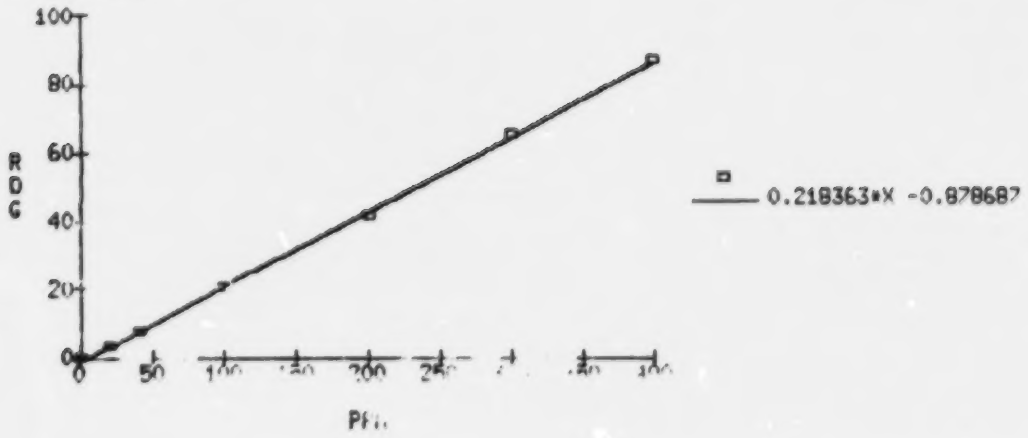
#ACETAC_0 12R x 5C

ppm	'9513'	'0177'	'6955'	'6969'
0.0	0.00	0.00	0.00	0.00
20.0	3.50	2.50	3.45	4.40
40.0	8.60	6.55	8.15	9.05
100.0	20.50	17.50	20.50	24.50
200.0	42.50	37.50	41.00	47.00
300.0	65.00	58.50	65.00	74.00
400.0	91.00	80.50	85.00	95.00
0.0	0.00	0.00	0.00	0.00
3.8	4.40	4.30	3.70	4.05
8.4	9.55	9.30	9.30	9.55
93.0	90.00	88.50	98.00	99.50

#ACETAC_051 7R x 6C

PPM	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
20	3.616667	2.627119	3.273980	4.112563	3.407582
40	8.886667	6.883051	7.734184	8.458794	7.990674
100	21.183333	18.799074	19.454082	22.8994	0.481686
200	43.916667	39.4	38.908163	43.929648	41.54031
300	67.166667	61.4745	61.683	68.165829	64.8
400	94.	84.393220	80.	8.793970	92.

ACETAC_05 1



ACETALDEHYDE - 3R - 30

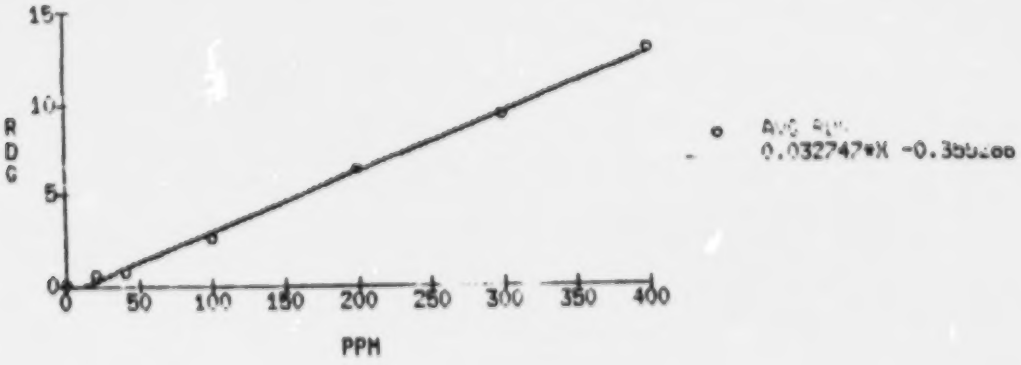
PPM	'81428'	'81463'	'82570'	'82704'	
0	0.0	0.0	0.0	0.0	0.0
20	1.2	0.6	0.1	0.2	
40	1.6	0.6	0.4	0.3	
100	3.4	2.0	2.2	1.6	
200	7.2	6.4	6.0	5.2	
300	10.6	9.7	9.3	8.3	
400	13.4	14.3	11.8	12.7	
0	0.0	0.0	0.0	0.0	0.0
10	11.8	12.0	12.4	11.7	
101	102.0	105.0	102.0	100.0	

ACETALDEHYDE - 3R - 30

PPM	'81428'	'81463'	'82570'	'82704'	
0	0.000000	0.000000	0.000000	0.000	0.000000
20	1.188235	0.577143	0.099020	0.202	0.516599
40	1.584314	0.577143	0.396078	0.303	0.715149
100	3.364706	2.693333	2.178431	1.616	2.463666
200	7.624510	6.156190	5.941176	5.252	6.243469
300	10.496078	9.330476	9.208824	8.383	9.354595
400	13.268627	13.947619	11.684314	12.827	12.931890

ACETALDEHYDE

ACETAL - 30



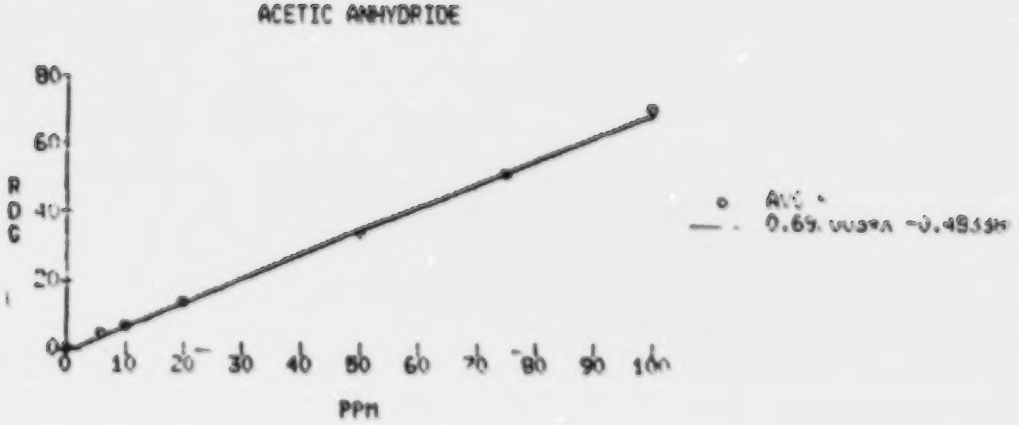
$ACETAN_O 12R x 5C

PPM	'9513'	'0177'	'6955'	'6969'
0.0	0.0	0.00	0.00	0.0
6.0	4.3	3.65	3.75	4.8
10.0	7.1	6.15	5.75	7.6
20.0	13.0	12.00	12.00	15.5
50.0	33.5	32.00	30.00	38.0
75.0	52.0	51.00	45.50	56.0
100.0	71.0	69.50	63.50	76.5
0.0	0.0	0.00	0.00	0.0
3.8	4.4	4.40	3.30	4.2
8.4	9.7	9.55	8.55	9.9
93.0	90.5	91.00	92.50	97.5

$ACETAN_OS1 7R x 5C

PPM	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
6	4.418786	3.730220	3.267563	4.578462	3.998758
10	7.296136	6.285165	5.781081	7.249231	6.652902
20	13.359116	12.263736	12.064865	14.784615	13.118083
50	34.425414	32.703297	30.162162	36.746154	33.384257
75	53.436464	52.120879	45.745946	53.415385	51.179668
100	72.961326	71.027473	63.843243	72.969231	70.200318

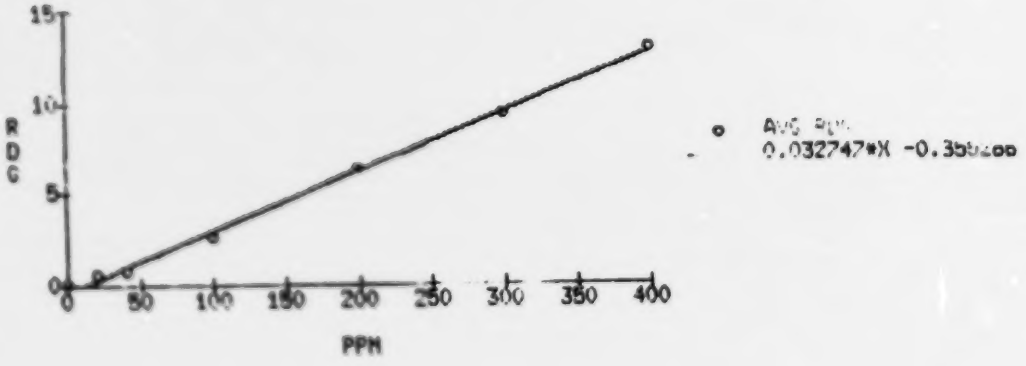
* ACETAN_OS



PPM	'81428'	'81469'	'82070'	'82084'	
0	0.0	0.0	0.0	0.0	
20	1.2	0.6	0.1	0.2	
40	1.6	0.6	0.4	0.3	
100	3.4	2.0	2.2	1.6	
200	7.2	6.4	6.0	5.2	
300	10.6	9.4	9.3	8.3	
400	13.4	14.3	11.8	12.4	
0	0.0	0.0	0.0	0.0	
10	11.8	12.0	12.4	11.4	
101	102.0	105.0	102.0	100.0	

PPM	'81428'	'81469'	'82070'	'82084'	
0	0.000000	0.000000	0.00	0.000	0.00
20	1.188235	0.577143	0.099020	0.202	0.516599
40	1.584314	0.577143	0.396078	0.303	0.219144
100	3.360000	2.693333	2.178431	1.616	2.463000
200	7.624510	6.156190	5.941176	5.252	6.243469
300	10.496078	9.330476	9.208824	8.383	9.354595
400	13.268627	13.947619	11.684314	12.827	12.931890

ACETALDEHYDE



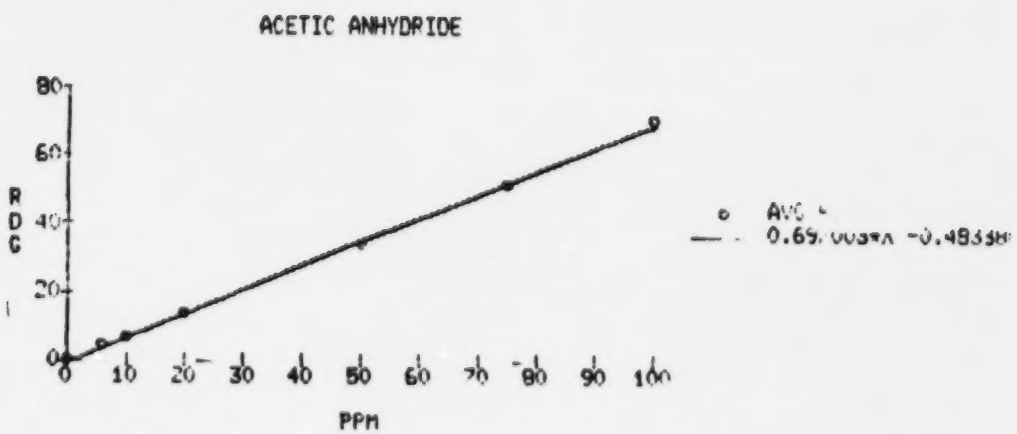
#ACETAN_O 12R x 5C

PPM	'9513'	'0177'	'6955'	'6969'
0.0	0.0	0.00	0.00	0.0
6.0	4.3	3.65	3.75	4.8
10.0	7.1	6.15	5.75	7.6
20.0	13.0	12.00	12.00	15.5
50.0	33.5	32.00	30.00	38.0
75.0	52.0	51.00	45.50	56.0
100.0	71.0	69.50	63.50	76.5
0.0	0.0	0.00	0.00	0.0
3.8	4.4	4.40	3.30	4.2
8.4	9.7	9.55	8.55	9.9
93.0	90.5	91.00	92.50	97.5

#ACETAN_OS1 7R x 5C

PPM	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
6	4.418786	3.730220	3.267563	4.578462	3.998758
10	7.296136	6.285165	5.781081	7.249231	6.652902
20	13.359116	12.263736	12.064865	14.784615	13.118083
50	34.425414	32.703297	30.162162	36.246154	33.384257
75	53.436464	52.120879	48.745946	53.415385	51.179668
100	72.961326	71.027473	63.843243	72.969231	70.200318

ACETAN_OS



#ACETAN_H 11R v 5C

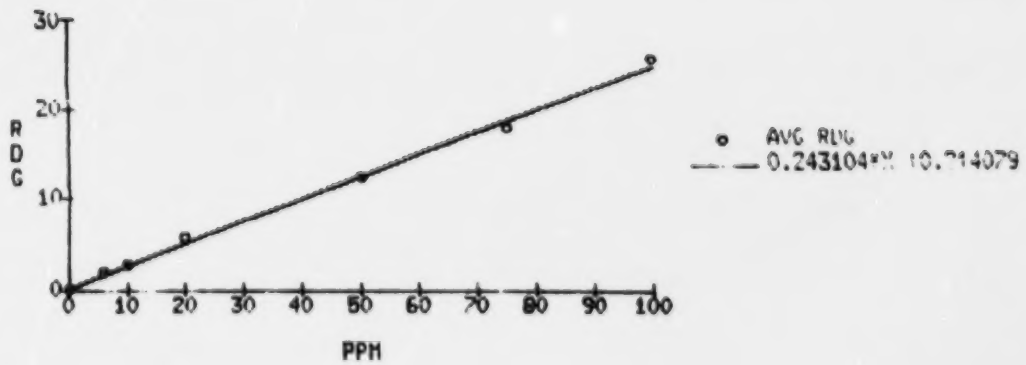
PPM	'81428'	'81469'	'81470'	'82[illegible]'
0	0.0	0.0	0.0	0.0
6	2.2	2.0	1.2	1.8
10	3.7	2.7	2.0	2.4
20	6.6	5.8	6.4	4.8
50	15.3	13.0	17.0	10.0
75	23.0	19.4	17.0	14.4
100	30.0	28.0	26.0	18.9
0	0.0	0.0	0.0	0.0
10	12.2	12.4	12.8	11.2
101	103.0	105.0	104.0	100.0

#ACETANHS 7R v 5C

PPM	'81428'	'81469'	'81470'	'82[illegible]'	
0	0.000000	0.00[illegible]	0.00[illegible]	0.00[illegible]	v.00[illegible]
6	2.647513	1.923810	1.165[illegible]	1.818	1.8886[illegible]
10	3.628155	2.597143	1.942308	2.424	2.647901
20	6.667961	5.194286	5.244231	4.545	5.412869
50	15.0[illegible]	12.504762	11.65[illegible]	10.[illegible]00	12.315380
75	22.553398	18.660952	16.509615	12.[illegible]22	17.511491
100	29.417476	26.933333	25.250000	19.089	25.172452

ACETAN_HS

ACETIC ANHYDRIDE



$ACE1 0 179 x 20

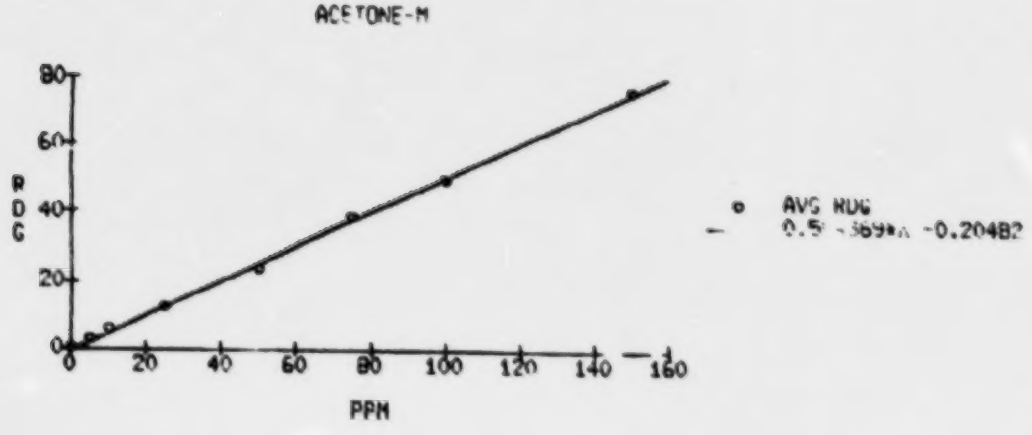
Sample Readings

PPM	'9509'	'9513'	'0172'	'6955'	'6969'	'7389'
0.0	0.0	0.00	0.00	0.00	0.0	0.0
5.0	3.4	3.00	2.55	1.80	2.5	2.4
10.0	7.4	6.25	5.60	4.15	5.0	5.4
25.0	15.0	12.50	11.50	11.00	12.50	11.5
50.0	26.0	24.00	23.00	22.00	24.5	22.0
75.0	44.0	39.50	38.00	35.00	40.00	34.0
100.0	56.0	51.00	50.00	45.00	51.00	44.0
150.0	95.0	77.00	79.00	70.00	78.0	60.0
400.0	170.0	200.00	200.00	200.00	210.0	140.0
700.0	300.0	350.00	375.00	360.00	375.00	260.0
1000.0	460.0	540.00	570.00	535.00	560.00	395.0
0.0	0.0	0.00	0.00	0.00	0.00	0.0
3.8	5.1	4.85	4.65	3.00	3.35	4.5
8.4	10.0	9.50	10.00	7.30	8.30	9.0
93.0	94.0	97.00	99.00	90.00	87.50	92.0
498.0	395.0	500.00	530.00	535.00	500.00	415.0

$ACE1.OS1 8R x 8C

PPM	'9509'	'9513'	'0172'	'6955'	'6969'	'7389'	
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5	3.363830	2.876289	2.395455	1.860000	2.497714	2.426087	2.569896
10	7.321277	5.992268	5.260606	4.288333	5.367429	5.458636	5.614768
25	14.840426	11.984536	10.803030	11.366667	13.285714	11.625000	12.317562
50	25.[illegible]	23.010309	21.60[illegible]	22.733333	26.04[illegible]	20.217391	23.221750
75	43.561915	37.871134	35.696970	36.166667	42.514286	34.369565	38.358423
100	55.[illegible]	48.896907	46.90[illegible]	46.500000	54.20[illegible]	44.478261	49.409139
150	85.085106	73.824742	74.212121	72.333333	82.902857	68.739130	76.182882

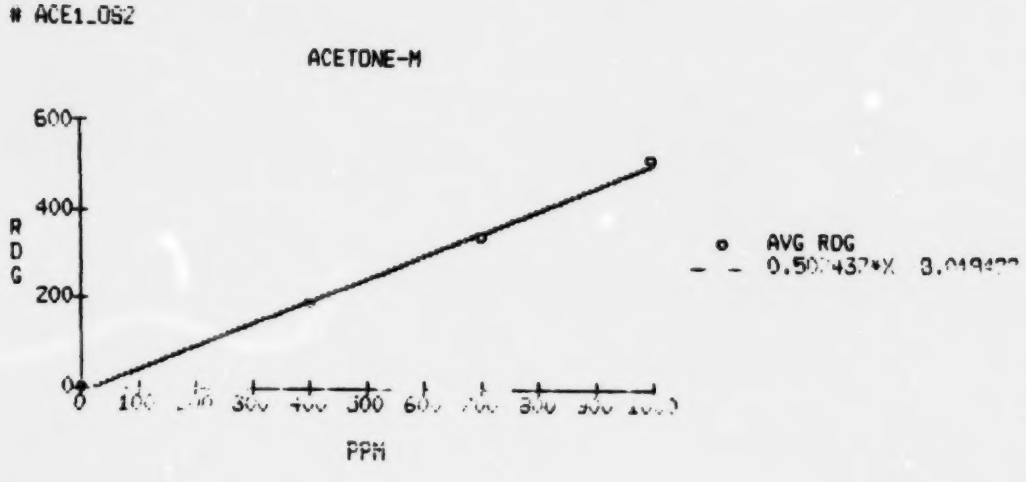
$ACE1_OS1



#ACE1_052 4R x 8C

PPM	'9509'	'9513'	'017'	'6955'	'5[illegible]'	'[illegible]380'	
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
400	168.419362	192.012371	188.[illegible]	206.946[illegible]	2[illegible]	141.713478	18[illegible]
700	297.210638	336.021649	352.[illegible]0000	3[illegible]	399.111429	26[illegible]	336.[illegible]
100[illegible]	455.[illegible]	518.433402	536.[illegible]	553.382333	590.[illegible]	399.834457	509.959929

ACE1_052



#ACE1_... 3R x 5C

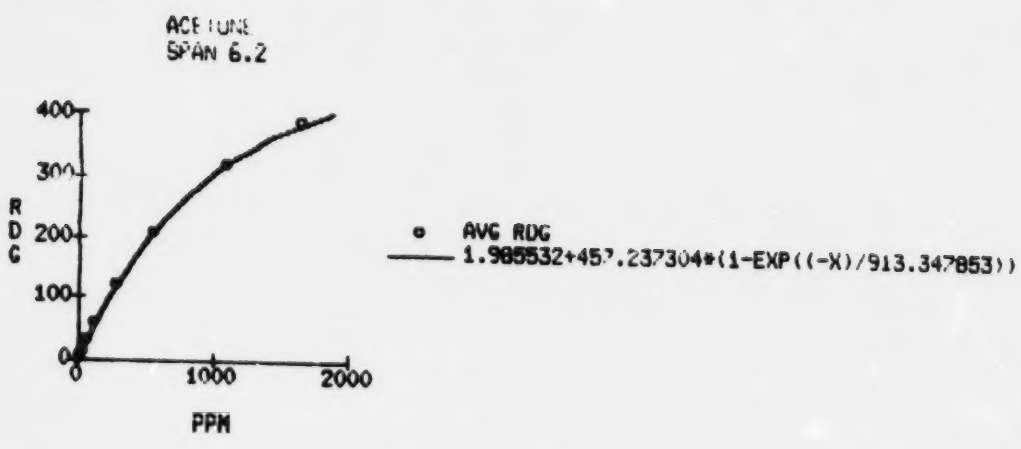
SPAN 6.2 DATA

PPM	'82764'	'81470'	'82756'	'82757'
0.0	0.0	0	0.0	0.0
10.9	9.2			10.4
22.0	16.0		16.9	18.7
55.0	36.0	41		41.0
109.0	68.0	79		76.0
272.0	148.0	174	163.0	164.0
545.0	260.0	280	290.0	290.0
1089.0	410.0	410	455.0	450.0
1634.0	495.0	475	545.0	560.0
0.0	0.0	0	0.0	0.0
101.0	128.0	135	140.0	143.0
508.0	495.0	470	545.0	570.0

#ACE1_HS 9R x 6C

PPM	'82764'	'81470'	'82756'	'82757'	
0.0	0.000000	0.000000	0.000000	0.000000	
10.9	7.259375			7.345455	7.31
22.0	12.625000		12.192143	13.207692	12.68
55.0	28.406250	30.674074		28.958042	29.35
109.0	53.656250	59.103704		53.678322	55.49
272.0	116.781250	130.177778	117.592857	115.832168	120.10
545.0	208.156250	209.481481	209.214286	204.825175	207.17
1089.0	323.515625	328.740741	328.750000	317.832168	319.09
1634.0	390.585938	385.370370	393.142857	395.524476	384.67

ACE1_HS



#ACE2 0 149 x 4C

DVA ACETONE DS1

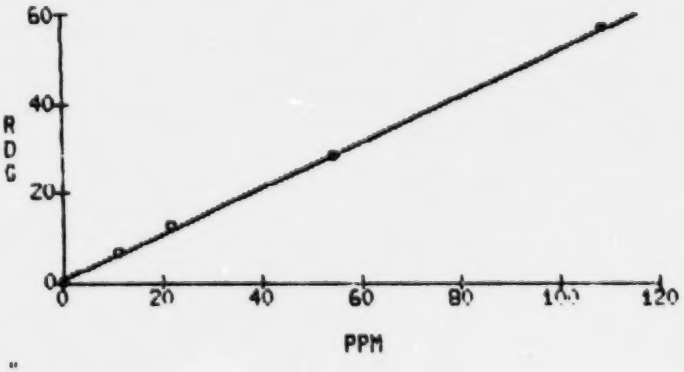
PPM	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
10.9	6.5	8.6	6.9
21.8	11.0	16.0	12.5
54.5	24.5	35.0	28.5
108.8	50.0	70.5	52.0
272.6	115.0	175.0	145.0
543.8	250.0	365.0	315.0
1090.3	540.0	780.0	685.0
1635.4	845.0	1000.0	1000.0
0.0	0.0	0.0	0.0
8.4	8.7	10.0	8.7
93.0	87.5	105.0	97.0
498.0	480.0	600.0	585.0

#ACE2 DS1 5R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
10.9	6.908571	7.617143	6.615464	7.047059
21.8	11.691429	14.171429	11.984536	12.615798
54.5	26.040000	31.000000	27.324742	28.121581
108.8	53.142857	62.442857	54.649485	56.745066

ACE2_DS1

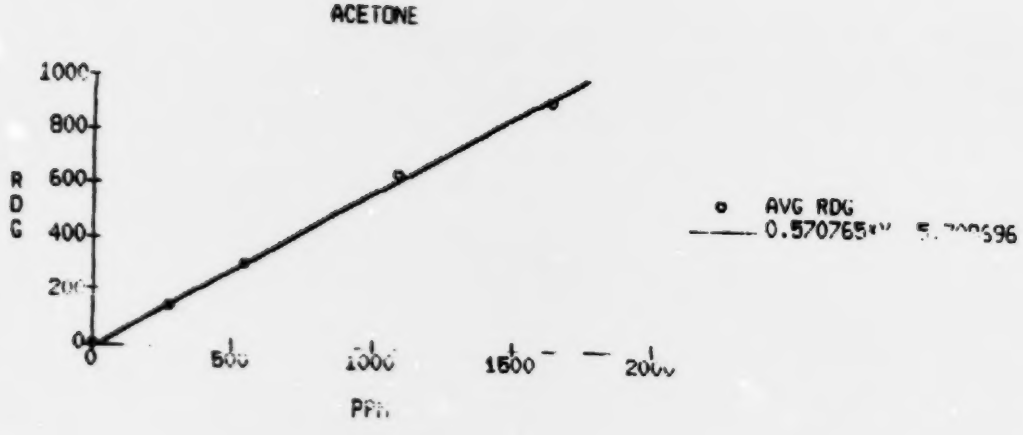
ACETONE



#ACE2_OS2 ER x SC

PPM	Z '9507'	'9509'	'9514'	
0.0	0.000000	0.000000	0.000000	0.000000
272.6	122.394171	155.210000	139.[illegible]969	138.93[illegible]18
543.8	266.074286	323.[illegible]3714	302.413485	297.405828
1090.3	574.720457	691.793143	657.642371	641.385324
1635.4	899.331086	886.914286	960.061856	915.435742

ACE2_OS2



#ACE2 HS 99 x 5C

SPAN 9.9 DATA

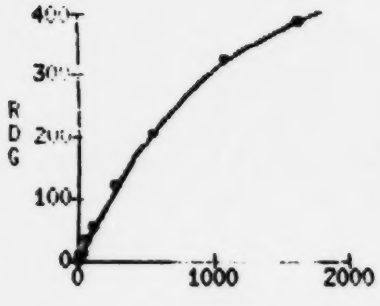
PPM	'82/64'	'81470'	'82/56'	'82/57'
0.0	0.0	0.0	0.0	0.0
10.3	6.4	6.4	6.2	7.0
21.8	10.7	11.8	11.2	12.4
54.5	24.0	27.0	26.0	27.0
109.0	48.0	52.0	49.0	54.0
272.0	99.0	112.0	108.0	109.0
545.0	171.0	178.0	190.0	189.0
1089.0	280.0	270.0	305.0	305.0
1634.0	335.0	315.0	360.0	380.0
0.0	0.0	0.0	0.0	0.0
10.0	9.9	10.3	10.4	11.2
101.0	86.0	88.0	94.0	95.0
508.0	330.0	310.0	360.0	380.0

#ACE2 HS 99 x 5C

PPM	'82/64'	'81470'	'82/56'	'82/57'	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
10.9	7.281395	7.345455	6.861111	7.442105	7.181818
21.8	12.568079	13.627119	12.034043	13.137143	12.831665
54.5	28.196067	30.888636	27.936170	28.205263	28.956109
109.0	54.117206	59.615385	52.648352	54.222222	55.142156
272.0	116.262442	126.545455	116.047847	115.884211	119.184915
545.0	200.825581	204.295455	204.148936	200.550802	202.591704
1089.0	308.837209	309.886364	324.731183	324.736842	327.649718
1634.0	393.430233	361.534091	386.989247	404.000000	386.413209

ACE2 HS

ACETONE
SPAN 9.8



2.258438*471.207741*(1-EXP((-X)/964.626083))

#ACETONE 15R x 5C

Sample Readings

PPM	'9513'	'0177'	'6955'	'6969'	
0.0	0.00	0.0	0.00	0.00	
5.0	4.35	3.8	3.00	3.35	
10.0	6.95	6.8	5.40	5.70	
20.0	39.00	31.5	31.50	31.00	
30.0	48.00	46.0	44.50	45.00	
40.0	66.00	60.0	56.50	57.50	
50.0	95.50	89.5	88.00	86.00	
100.0	165.00	140.0	160.00	140.00	
200.0	380.00	330.0	355.00	320.00	
0.0	0.00	0.0	0.00	0.00	
3.8	5.05	4.6	3.40	3.95	
8.4	10.00	9.5	8.55	8.75	
93.0	99.00	94.0	95.00	91.50	
498.0	540.00	480.0	540.00	490.00	

#ACETONE 7R x 6C

PPm	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
5	4.086364	3.759574	2.936842	3.404918	3.545925
10	6.528788	6.727660	5.286316	5.793443	6.084051
20	36.636364	31.164894	30.836842	31.500000	32.536574
30	45.090909	45.510638	43.563158	45.737705	44.975603
40	62.000000	59.361702	55.310526	58.442623	58.778713
50	89.712121	88.547872	86.147368	87.409836	87.954307

THE [illegible] OF THE [illegible]
1.[illegible] 5.148859

#ACETONE 3R x 6C

PPm	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
100	156.212121	138.698798	156.842789	142.487869	148.309989
200	351.454545	326.930723	342.994158	325.620000	339.511788

THE [illegible] OF THE [illegible]
1.[illegible] 7.149565

#AC_0 15R - 4C

OVA ACRYLONITRILE DATA

PPm	'95[illegible]	'95[illegible]	'9513'
0.0	0.00	0.00	0.00
3.3	2.40	2.55	2.35
5.4	3.95	4.25	3.85
10.9	7.30	7.90	7.00
27.2	18.00	18.50	18.00
54.5	35.00	37.50	36.00
81.5	54.50	59.50	56.00
109.0	68.50	76.00	71.00
326.6	200.00	220.00	240.00
0.0	0.00	0.00	0.00
3.8	4.30	4.70	4.20
8.4	9.60	10.10	9.10
93.0	95.50	105.00	100.00
498.0	495.00	510.00	59[illegible]

#AC_051 8R x 5C

PPm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000[illegible]	[illegible]	0.000000
3.3	2.337173	2.258571	2.1855	2.2604[illegible]
5.4	3.846597	3.764286	3.5805	3.730461
10.9	7.108901	6.997143	6.5100	6.872014
27.2	17.528796	16.385714	16.7400	16.884837
54.5	34.083770	33.214286	33.4800	33.592685
81.5	53.073200	52.700000	52.0800	52.617265
109.0	66.706806	67.314[illegible]	66.0300	66.6838[illegible]

THE [illegible] OF [illegible]
0.[illegible]

#AC [illegible] - 3C

PPm	'9507'	'9509'	'[illegible]	
0.0	0.000000	0.000000	0.0000	0.00
326.6	195.028272	195.121143	223.5024	204.56[illegible]

THE [illegible] OF THE [illegible] FIT [illegible]
0.[illegible] 0

#AM_H 9R x 5C

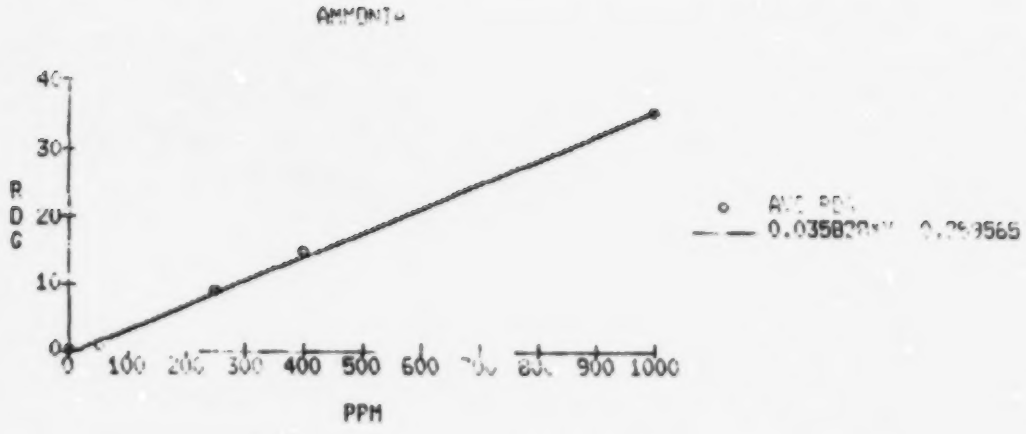
Sample Readings

ppm	'81428'	'81469'	'81[illegible]'	'82764'
0	0.0	0.0	0.0	0.0
50	1.4	0.6	[illegible]	0.[illegible]
250	11.5	9.0	9.1	7.1
400	17.6	16.[illegible]	15.4	11.9
1000	42.0	38.0	3[illegible]	[illegible]
0	0.0	0.0	[illegible]	0.[illegible]
10	12.4	12.6	[illegible]	12.0
101	103.[illegible]	105.0	10[illegible]	104.[illegible]

#AM_HS 5R x 6C

ppm	'81428'	'81469'	'81470'	'82764'	[illegible]
0	0.000000	0.000000	0.000000	0.000000	0.000000
50	1.372816	0.577143	0.571698	0.194231	0.678972
250	11.276699	8.[illegible]	3.670755	6.8361[illegible]	[illegible]
400	17.[illegible]252	15.96[illegible]	14.[illegible]5585	11.5[illegible]	14.76[illegible]856
1000	41.184[illegible]	36.9[illegible]	35.264[illegible]	3.[illegible]	5.288[illegible]

#[illegible]



#BE_O 18R × 4C

OVA BENZENE DATA

ppm	'9507'	'9509'	'9513'
0.0	2.0	0.0	0.0
5.0	7.0	9.0	7.0
15.0	20.5	26.5	22.5
39.0	54.0	71.0	60.0
50.5	72.0	101.0	79.0
152.0	210.0	280.0	240.0
203.0	290.0	420.0	340.0
355.0	510.0	690.0	590.0
10.0	14.5	21.0	17.0
101.0	135.0	210.0	170.0
508.0	785.0	>1000	980.0
0.0	0.0	0.0	0.0
93.0	90.0	105.0	96.0
93.0	88.0	105.0	94.0
498.0	490.0	580.0	585.0
498.0	490.0	585.0	570.0
498.0	490.0	610.0	580.0

#BE_OS1 6R × 5C

ppm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
5.0	7.314607	7.971429	7.048421	7.444819
15.0	21.421348	23.471429	22.028316	22.306364
39.0	56.426966	62.885714	58.736842	59.349841
50.5	75.235955	89.457143	77.336842	80.676647
10.0	15.151685	18.600000	16.642105	16.797930

[illegible]

#BE_OS2 6R × 5C

ppm	'9507'	'9509'	'9513'	
0	0.000000	0.000000	0.000000	0.000000
152	219.735956	248.210154	235.387794	234.444485
203	303.444270	372.315231	333.466042	336.408514
355	533.643371	611.660385	588.469486	577.924531
101	141.258539	186.157616	166.753021	164.716392
508	821.392247	886.236990	961.166827	889.598688

[illegible]

DATA

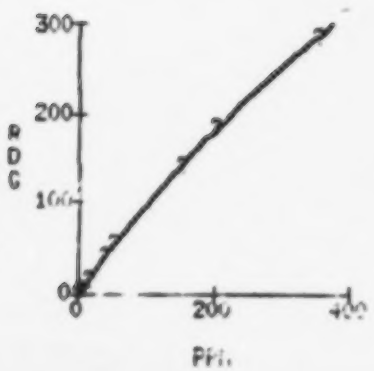
PPM	'82764'	'81470'	'82756'	'8275?'
0	0.0	0.0	0.0	0.0
5	5.4	[illegible]	[illegible]	[illegible]
15	15.2	15.7	14.7	[illegible]
39	37.0	38.0	[illegible]	[illegible]
51	[illegible]	[illegible]	[illegible]	[illegible]
152	132.0	137.0	134.0	131.0
203	174.0	177.0	182.0	172.0
355	270.0	270.0	280.0	[illegible]
0	0.0	0.0	0.0	0.0
10	10.9	10.3	10.8	12.0
10	11.0	11.0	10.6	11.5
101	[illegible]	97.0	96.0	96.0
101	94.0	94.0	95.0	96.0
101	94.0	93.0	98.0	100.0
508	360.0	330.0	380.0	370.0
508	360.0	340.0	370.0	370.0

[illegible] 60

PPM	'82764'	'81470'	'82756'	'8275?'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
5	5.807178	5.528421	5.260417	6.039175	5.657535
15	16.331915	16.691579	15.465625	16.481546	16.235168
39	39.755319	40.400000	37.875000	39.567010	39.393332
51	53.723404	51.031579	52.604167	53.103093	52.615561
152	141.829787	145.557632	140.979167	136.402062	141.215917
203	186.957447	188.178947	191.479167	179.092784	186.422680
355	290.106383	287.052632	294.583333	281.134021	288.219092

[illegible] BE.HS

BENZENE



? [illegible]
[illegible] 0.143327+677.973064*(1-EXP((-X)/840.[illegible]

BBTD_0 16R x 5C

PPT	'9513'	'0177'	'6955'	'6969'
0.0	0.00	0.00	0.00	0.00
15.0	5.00	5.00	3.90	5.00
25.0	9.00	8.40	6.50	8.40
100.0	35.00	34.00	31.00	34.00
150.0	52.50	52.00	49.30	52.50
200.0	77.00	76.00	71.00	76.00
250.0	96.00	93.50	89.00	94.00
500.0	190.00	175.00	206.00	190.00
1000.0	335.00	320.00	355.00	320.00
2000.0	880.00	810.00	905.00	820.00
0.0	0.00	0.00	0.00	0.00
3.8	4.70	4.90	4.15	3.95
8.4	9.50	10.00	9.45	8.35
93.0	95.00	98.00	99.00	96.50
490.0	520.00	490.00	585.00	495.00

BBTD_0S1 .9R x 6C

P/	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
15	5.090826	4.887245	3.710606	3.854922	4.385825
25	8.987368	8.445818	6.981515	6.794301	7.787276
100	34.263188	32.268206	29.121212	33.240206	32.274595
150	51.394737	49.34[illegible]	46.030303	50.596856	49.341958
200	75.378947	72.174419	66.696970	73.243566	71.860472
250	93.978947	88.729592	83.606061	90.530574	89.228310

The [illegible] Of [illegible] F11 [illegible]
0.[illegible]8X 1.4[illegible]18

BBTD_0S2 48 x 6C

PPT	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
500	186.252000	166.296429	197.836667	183.356891	182.185497
1000	328.331684	304.084898	338.[illegible]	308.811606	318.[illegible]
2000	862.640842	769.714898	851.303333	791.329741	818.747204

The [illegible] Of [illegible]
0.[illegible] [illegible]

#BTD.H 13R x 5C

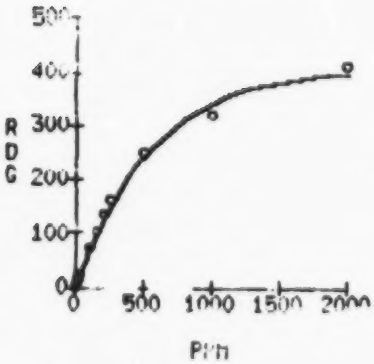
PPM	'81428'	'81469'	'81470'	[illegible] '82[illegible]
0	0.0	0.0	0.0	0.0
15	12.5	10.8	10.8	8.9
25	19.4	19.6	18.8	18.0
100	72.0	76.0	74.0	67.0
150	102.0	106.0	103.0	[illegible]
200	132.0	138.0	136.0	126.0
250	158.0	162.0	164.0	153.0
500	250.0	240.0	260.0	255.0
1000	300.0	300.0	340.0	340.0
2000	370.0	380.0	450.0	460.0
0	0.0	0.0	0.0	0.0
10	11.9	11.8	12.2	11.2
101	102.0	104.0	103.0	98.0
508	300.0	300.0	360.0	380.0

#[illegible] 4[illegible] x 6C

PPM	'81428'	'81469'	'81470'	[illegible] '82[illegible]	
0	0.000000	0.000000	0.000000	0.000000	0.000000
15	12.377451	10.488462	10.590291	9.172449	10.657163
25	19.209804	19.034615	18.434951	18.551020	18.807598
100	71.294118	73.807692	72.563107	69.051020	71.678984
150	101.000000	102.942308	101.000000	97.908163	100.712618
200	130.705882	134.019231	133.359223	129.857143	131.985370
250	156.450980	157.326923	160.815534	157.683673	158.069278
500	247.549020	233.076923	254.951456	262.806122	249.595880
1000	297.058824	291.346154	333.398058	350.408163	318.052800
2000	366.372549	369.038462	441.262136	474.081633	417.689695

[illegible]

1,3-BUTADIENE



o AVG RDG

——— 3.830558+4[illegible]3.[illegible]5*(1-EXP((-X)/563.[illegible])

#BTN1_D 14P x 7C

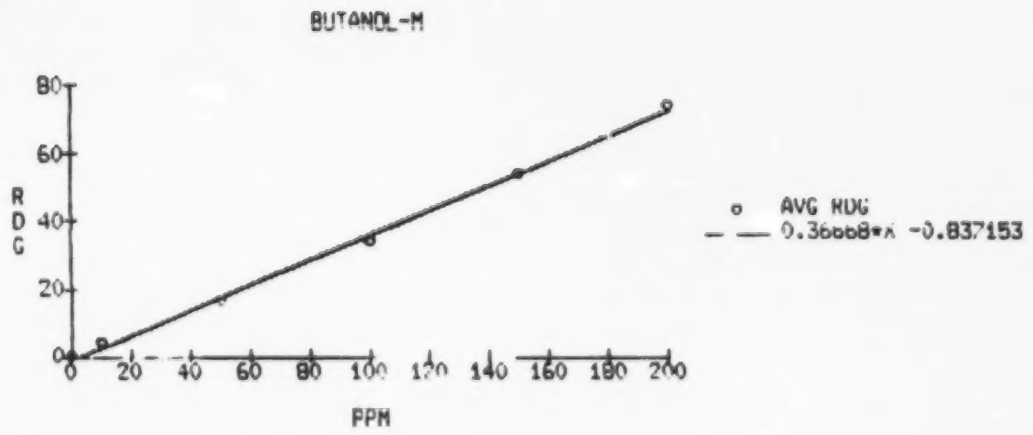
Sample Readings

ppm	'9509'	'9513'	'0172'	'6955'	'6969'	'7389'
0.0	0.0	0.00	0.00	0.00	0.00	0.0
10.0	4.0	4.00	3.40	3.00	3.00	4.2
50.0	18.5	17.00	13.00	16.00	18.00	15.0
100.0	38.0	34.50	29.50	33.50	38.50	31.0
150.0	60.5	54.00	50.00	50.50	59.50	50.0
200.0	83.5	74.00	69.00	71.00	79.00	66.0
500.0	175.0	200.00	165.00	220.00	205.00	145.0
1000.0	440.0	525.00	335.00	460.00	520.00	360.0
0.0	0.0	0.00	0.00	0.00	0.00	0.0
3.8	4.5	4.75	4.20	3.15	3.40	4.8
8.4	9.0	8.50	9.25	8.05	7.65	8.0
93.0	94.0	94.00	89.50	95.00	92.00	91.0
438.0	390.0	438.00	440.00	500.00	420.0	378.0

#BTN1 DS1 6R x 8C

ppm	'9509'	'9513'	'0172'	'6955'	'6969'	'7389'	
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
10	4.748936	3.957447	3.532961	3.132632	3.622105	4.292308	3.981132
50	18.307191	16.819149	13.508380	15.663158	17.621053	15.329670	16.207434
100	37.595745	34.132979	30.653631	32.794737	37.689474	31.681319	34.091314
150	59.856383	54.414894	51.955307	49.436842	58.247368	51.098901	54.168283
200	82.611702	73.212766	71.698324	69.505263	77.336842	67.450549	73.635908

BTN1 DS1

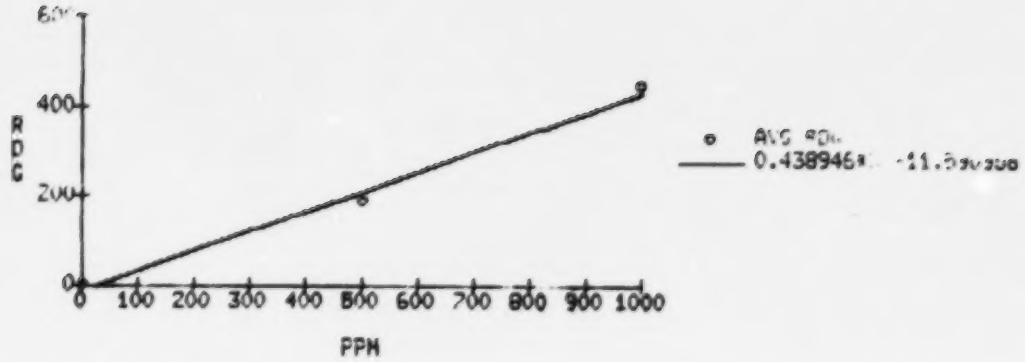


*BTN1.DB2 3R x BC

PPM	'9509'	'9513'	'917'	'6955'	'6969'	'7389'		
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
500	173.372872	198.142426	171.[illegible]	218.660211	200.956105	148.387882	184.700333	
1000	435.908936	520.118617	348.572179	450.928845	509.742310	368.410549	438.946415	

* BTN1.DB2

BC/RDG



#BTN_H 13R x 6C

DATA

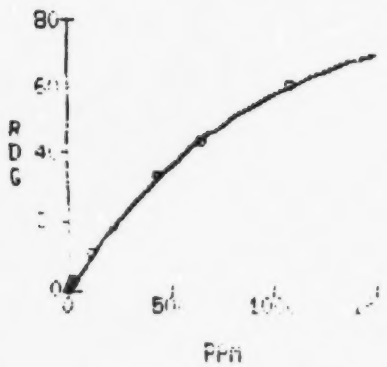
PPM	'82764'	'81470'	'82756'	'82757'
0.0	0.0	0.0	0.0	
10.9	1.8	1.4	1.7	
27.0	2.7	2.6	2.5	3.1
109.0	9.7	9.8	9.4	12.4
218.0	16.4	17.1	16.2	23.0
436.0	31.0	33.0	31.0	40.0
653.0	40.0	43.0	40.0	52.0
1089.0	56.0	60.0	56.0	72.0
0.0	0.0	0.0	0.0	0.0
10.0	11.0	11.9	10.2	11.7
10.0	11.1	11.8	10.0	13.0
101.0	99.0	109.0	91.0	106.

#BTN_HS 9R x 6C

PPM	'82764'	'81470'	'82756'	'82757'	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
10.9	1.530303	1.297248	1.331868	1.524528	1.420987
27.0	2.754545	2.409174	2.774725	2.953774	2.723055
109.0	9.895960	9.080734	10.432967	11.815094	10.306189
218.0	16.731313	15.844954	17.980[illegible]	21.915094	18.117895
436.0	31.526263	30.577982	34.[illegible]	38.113208	33.[illegible]
653.0	40.908081	39.844037	44.[illegible]	49.547170	43.[illegible]
1089.0	56.111111	55.596[illegible]	61.[illegible]	68.[illegible]	[illegible]

E[illegible]

BUTANOL



o AV[illegible]

— 0.245[illegible]*(1-EXP((-X)/30/.11584))

#BTN2_0 13R x 4C

OVA BUTANOL DATA

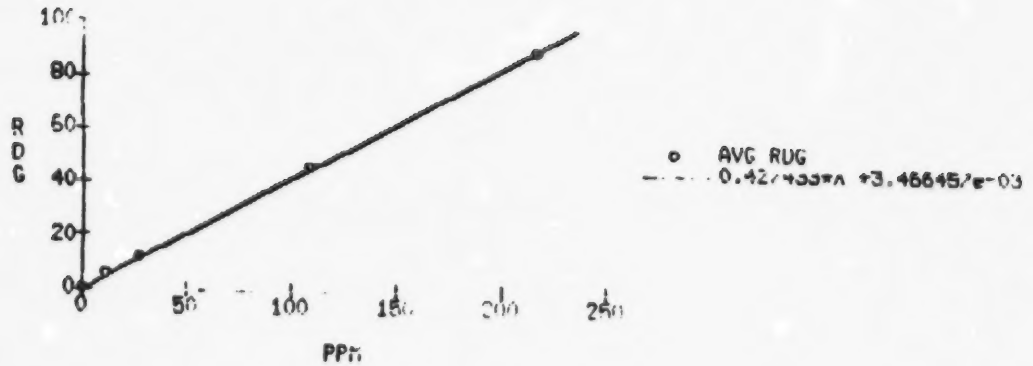
PPM	'9507'	'9509'	'9513'
0.0	0.0	0.00	0.0
10.9	4.8	5.45	4.2
27.3	10.0	12.00	9.2
109.1	41.0	50.00	42.0
217.6	81.0	98.00	84.0
436.3	190.0	220.00	220.0
651.9	290.0	445.00	350.0
1090.9	570.0	500.00	700.0
0.0	0.0	0.00	0.0
8.4	8.8	9.10	7.3
93.0	87.5	92.50	86.0
490.	475.	510.00	550.

#BTN2_091 5R x 5C

PP	'95[illegible]	'950[illegible]	[illegible]	[illegible]
0.0	0.000000	0.000000	0.000000	0.000000
10.9	5.101714	5.479459	4.541860	5.041011
27.3	10.628571	12.064865	9.948932	10.860758
109.1	43.577147	[illegible]	45.[illegible]	48.[illegible]
217.6	86.091479	98.529730	90.837209	91.81945[illegible]

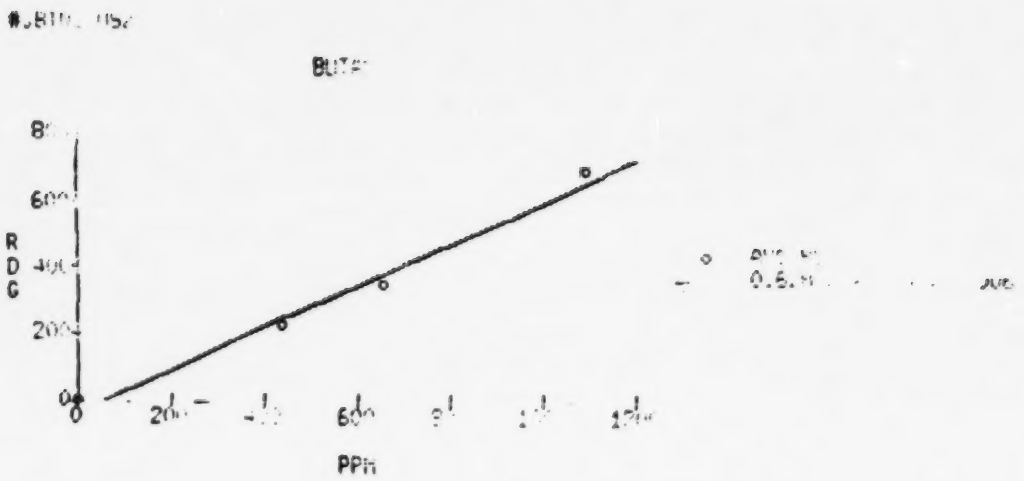
BTN2 051

BUTANOL



#BTN2_0S2 4R x 5C

PPm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
436.4	191.573486	221.488865	238.229302	217.097218
651.9	308.646171	347.334911	379.001163	344.994048
1090.9	606.64[illegible]	694.569622	758.[illegible]	686.440440



ppm	'0513'	'0177'	'0288'	'0200'
0.0	0.00	0.00	0.00	0.00
10.0	4.00	3.95	3.40	4.30
20.0	8.45	8.65	7.50	8.90
50.0	20.00	19.00	18.00	19.50
100.0	42.50	40.50	39.50	42.00
150.0	64.00	61.50	60.00	63.00
200.0	86.50	83.50	81.00	84.50
500.0	240.00	210.00	250.00	230.00
1000.0	595.00	545.00	630.00	560.00
0.0	0.00	0.00	0.00	0.00
3.8	4.20	4.20	3.60	4.25
8.4	9.20	9.35	8.55	9.45
93.0	97.50	91.00	96.50	92.00
498.0	5[illegible]	475.00	5[illegible]	485.00

BU_051 79 x 60

Pp	'0513'	'0177'	'0288'	'0200'	
0	0.00	[illegible]	0.00	[illegible]	[illegible]
10	4.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	[illegible]	9.84	[illegible]	9.9[illegible]	[illegible]
50	[illegible]	[illegible]	[illegible]	19.71[illegible]	[illegible]
100	[illegible]	41.39[illegible]	[illegible]	-2.45[illegible]	[illegible]
150	65.406533	62.85[illegible]	[illegible]	63.68[illegible]	[illegible]
200	88.4[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]
0.[illegible] 0.[illegible]

BE

ppm	'0513'	'0177'	'0288'	'0200'
0	0.[illegible]	[illegible]	[illegible]	[illegible]
50[illegible]	4.[illegible]	[illegible]	[illegible]	[illegible]
100[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]
0.5[illegible] 14.[illegible]

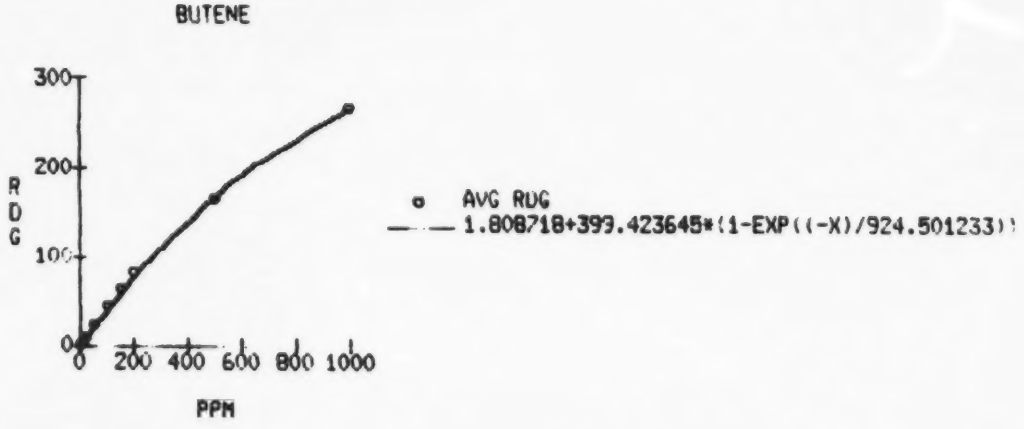
#B[illegible] 149 v 50

0	ppm	'81428'	'81469'	'81470'	'82764'
1	0	0.00	0.0	0.0	0.0
2	10	4.95	5.3	5.5	4.5
3	20	9.70	9.0	10.2	7.9
4	50	24.00	24.0	26.0	22.0
5	100	45.50	46.0	48.5	42.0
6	150	64.00	66.5	66.0	60.5
7	200	84.00	86.0	80.0	78.0
8	500	165.00	168.0	173.0	158.0
9	1000	260.00	270.0	280.0	270.0
10					
11	0	0.00	0.0	0.0	0.0
12	10	11.20	11.6	12.2	11.2
13	101	101.50	104.0	104.0	99.0
14	508	340.00	340.0	380.0	380.

#BUTAD [illegible]

	PPm	'81428'	'81469'	'81470'	'82764'	
1	0	0.000000	0.000000	0.000	0.000000	0.000000
2	10	4.826108	5.147115	5.439482	4.692929	5.026154
3	20	9.154680	8.730735	9.905[illegible]	8.[illegible]	8.965107
4	50	23.981773	23.307692	25.260000	22.444444	23.720978
5	100	45.275862	44.673077	45.158654	42.848485	44.489019
6	150	63.684729	64.581731	64.096154	61.722222	63.521209
7	200	83.586207	83.519231	83.519231	79.575758	82.550107
8	500	164.137192	163.154[illegible]	168.009615	161.191919	164.135643
9	1000	258.713218	26[illegible]	271.9[illegible]	265.454545	267.077093

BU.HS



#E [illegible]

DV- E [illegible]

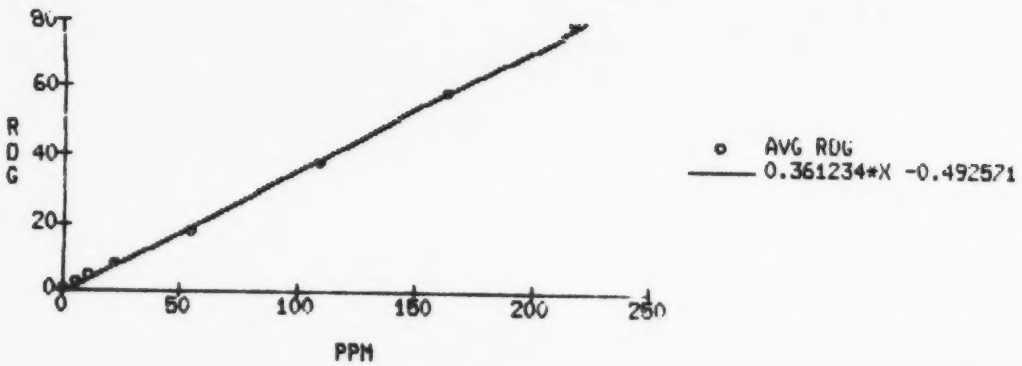
PPM	[illegible]	[illegible]	[illegible]
0.0	0.0	0.0	0.0
5.4	2.1	2.4	[illegible]
10.9	4.2	4.90	4.10
21.8	8.0	[illegible]	[illegible]
54.5	[illegible]	[illegible]	19.0
109.0	37.0	45.00	39.00
163.5	57.5	70.00	60.50
218.0	79.5	[illegible]	83.00
0.0	0.0	0.0	[illegible]
3.8	4.6	4.80	4.30
8.4	9.9	[illegible]	9.40
93.[illegible]	38.[illegible]	[illegible]	38.[illegible]
498.[illegible]	3[illegible]	5[illegible]	590.00

#BTR_051 RR x 50

PPM	'9507'	'9509'	'96[illegible]	[illegible]
0.0	0.000000	0.000000	0.000000	0.000000
5.4	1.992857	2.125714	2.087[illegible]	2.068776
10.9	3.985714	4.340000	3.890816	4.072177
21.8	7.591837	8.281429	7.354030	7.742540
54.5	16.607143	18.600000	18.038611	17.745918
109.0	36.112245	39.857143	37.010204	37.378531
163.5	54.566327	62.000000	57.413265	57.993197
218.0	75.443878	85.028571	78.765306	79.745918

BTR_051

BUTYRALDEHYDE



#BTR_H 13R x 5C

DATA

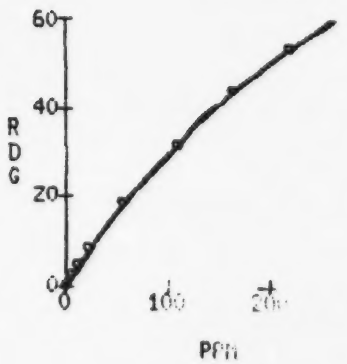
PPM	82764'	'81470'	'82756'	'82757'
0.0	0.0	0.0	0.0	0.0
5.5	2.1	2.3	2.1	2.1
10.9	4.1	4.3	4.0	4.2
22.0	7.7	8.1	7.5	7.8
55.0	17.4	18.5	17.2	17.8
109.0	30.0	31.0	29.0	30.
163.	41.	43.	41.	42.
218.	50.	53.	51.	52.
0.0	0.0	0.0	0.0	0.0
10.0	11.0	11.3	10.8	11.1
101.0	95.0	96.0	96.0	94.0
101.0	95.0	98.0	96.0	92.0

#BTR_H 5R x 6C

PPM	82764'	'81470'	82756'	'82757'	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
5.5	2.232843	2.401	2.208333	2.2	2.229412
10.3	4.358824	4.7	4.208333	4.561	4.401471
22.0	8.186316	8.43	7.990625	8.4	8.245192
55.	18.432353	19.2	18.	19.3	18.
109.	31.894737	32.478551	30.510417	32.588	31.81603
163.	43.6	44.	42.	43.	43.
218.	53.15	55.	53.65	54.301075	54.075192

BTR_HS

BUTYRALDEHYDE



o AVG ROG

—— 0.41804+96.733449*(1-EXP((-X)/270.416625))

#CD_H 18R x 6C

DATA

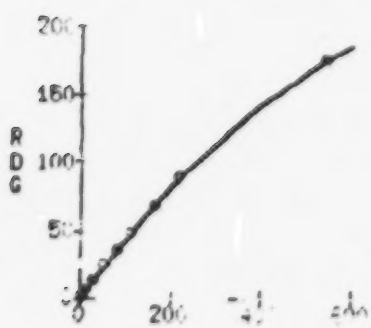
PPM	[illegible]	[illegible]1470	[illegible]	[illegible]
0.00	0.0	0.0	0.0	0.0
5.45	2.0	2.0	1.9	2.1
10.90	4.2	4.0	4.2	4.5
27.00	11.0	11.0	11.0	12.1
49.00	22.0	22.0	22.0	23.0
82.00	32.0	32.0	32.0	34.0
109.00	43.0	44.0	43.0	45.0
163.00	60.0	61.0	61.0	63.0
218.00	80.0	82.0	80.0	81.0
545.00	160.0	158.0	163.0	161.0
0.00	0.0	0.0	0.0	0.0
10.00	11.4	11.4	10.7	11.3
10.00	11.4	[illegible]	10.4	10.5
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
101.00	95.0	97.0	97.0	81.0
101.00	95.	[illegible]	[illegible]	80.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

#CD_HS 10R x 6C

PPM	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.00	0.000000	0.000000	0.000000	0.000000	0.000000
5.45	2.[illegible]	2.126316	2.[illegible]	2.474912	2.[illegible]
10.90	4.434602	4.253632	4.[illegible]	5.421[illegible]	4.[illegible]
27.00	11.[illegible]	11.[illegible]	11.[illegible]	[illegible]	[illegible]
49.00	23.21[illegible]	23.[illegible]	23.[illegible]	[illegible]	24.[illegible]
82.00	33.[illegible]	34.[illegible]	34.752688	40.[illegible]	35.[illegible]
109.00	45.[illegible]	46.278947	46.[illegible]	53.033839	47.[illegible]
163.00	63.322884	64.952632	66.247312	74.247375	67.[illegible]
218.00	84.430512	87.178947	86.881720	95.460910	88.488000
545.00	169.961024	167.978947	177.021505	189.[illegible]	175.901192

CD HS

CARBO[illegible]_FIDE



o AVG RDG

— ... 0.016019[illegible] [illegible]*EXP(-X/[illegible])

#BTR_H 13R x 5C

DATA

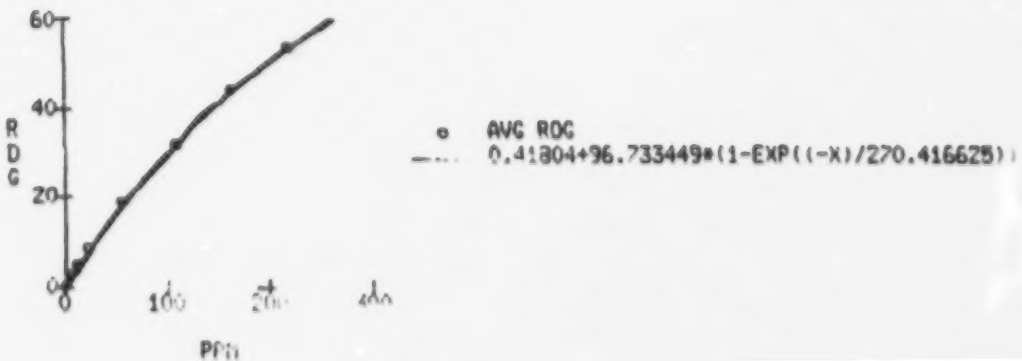
PPM	82764	81470	82736	82757
0.0	0.0	0.0	0.0	0.0
5.5	2.1	2.3	2.1	2.1
10.9	4.1	4.3	4.0	4.2
22.0	7.7	8.1	7.5	7.8
55.0	17.4	18.5	17.2	17.8
109.0	30.0	31.0	29.0	30.
163.	41.0	43.	41.	42.
218.	50.	54.	51.	52.
0.0	0.0	0.0	0.0	0.0
10.0	11.0	11.3	10.8	11.1
101.0	95.0	96.0	96.0	94.0
101.0	95.0	98.0	96.0	92.0

#BTR_H 13R x 6C

PPM	82764	81470	82736	82757	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
5.5	2.252941	2.484706	2.209333	2.209333	2.229412
10.9	4.356471	4.707059	4.208333	4.561440	4.401429
22.0	8.196316	8.432000	7.990625	8.400000	8.245492
55.0	18.492424	19.700000	18.000000	19.300000	18.600000
109.	31.894737	32.647059	30.510417	32.580000	31.816013
163.	43.636364	46.000000	42.000000	44.000000	43.000000
218.	53.157895	58.000000	53.655172	54.301075	54.075192

BTR_HS

BUTYRALDEHYDE



#CD_H 18R x 6C

DATA

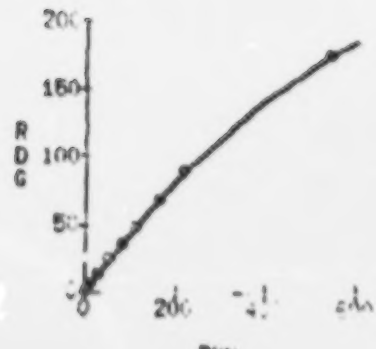
PPM	[illegible]	[illegible]8147U	[illegible]	[illegible]
0.00	0.0	0.0	0.0	0.0
5.45	2.0	2.0	1.9	2.1
10.90	4.2	4.0	4.2	4.6
27.00	11.0	11.0	11.0	12.1
49.00	22.0	22.0	22.0	23.0
82.00	32.0	32.0	32.0	34.0
109.00	43.0	44.0	43.0	45.0
163.00	60.0	61.0	61.0	63.0
218.00	80.0	82.0	80.0	81.0
545.00	160.0	158.0	163.0	161.0
0.00	0.0	0.0	0.0	0.0
10.00	11.4	11.4	10.7	11.3
10.00	11.4	[illegible]	[illegible]	10.8
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
101.00	95.0	97.0	97.0	81.0
101.00	98.	[illegible]	[illegible]	8[illegible]
5[illegible]	35[illegible]	310.	[illegible]	290.

#CD_HS 10R x 6C

PPM	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.00	0.000000	0.000000	0.00[illegible]	0.000000	0.[illegible]
5.45	2.[illegible]	2.126316	2.06[illegible]	2.474912	2.19[illegible]
10.90	4.436802	4.25[illegible]	4.56[illegible]	5.421[illegible]	4.6[illegible]
27.00	11.[illegible]	11.[illegible]	11.[illegible]	13.[illegible]	12.[illegible]
49.00	23.21[illegible]	23.[illegible]4	23.8[illegible]	2[illegible]61[illegible]	24.[illegible]
82.00	33.[illegible]	34.[illegible]	34.[illegible]688	40.[illegible]	35.[illegible]
109.00	45.[illegible]	46.278947	46.[illegible]	53.033839	47.[illegible]
163.00	63.322884	64.[illegible]632	66.247312	74.247[illegible]	6[illegible]250
218.00	84.430512	87.[illegible]	86.881[illegible]	99.460910	88.488[illegible]
545.00	169.961024	167.[illegible]	177.021508	189.[illegible]	176.901192

CD HS

CARBO[illegible]SULFIDE



o AVG RDG

— [illegible] 0.016019[illegible]

OCT_U 12R - 4C

DVA CARBON TETRACHLORIDE DATA

PPM	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.00
32.6	2.0	2.7	2.00
87.0	5.4	7.0	5.40
326.8	18.5	23.5	20.50
682.4	37.0	46.0	42.50
1087.4	62.0	76.0	71.50
0.0	0.0	0.0	0.00
3.8	4.5	4.9	4.50
8.4	9.8	10.0	9.45
93.0	97.5	99.0	105.00
498.0	500.0	535.0	600.00

OCT - - 5C

P	'950'	'950'	'9513'	
0.0	0.0	0.0	0.0	0.0
32.6	1.9	2.538		2.071
87.0	5.15	6.575	4.782857	5.503128
326.8	17.6	22.075	18.157143	19.293
682.4	38.297308	43.212121	37.642857	38.715
1087.4	59.139464	71.393939	63.328571	64.620324

[illegible]

[illegible]

[illegible]

PP	[illegible]			
0.0	[illegible]			
25.[illegible]	[illegible]	14.[illegible]	[illegible]	[illegible]
75.0	42.00	43.[illegible]	40.50	42.[illegible]
100.0	59.[illegible]	58.00	58.[illegible]	58.[illegible]
125.[illegible]	[illegible]	72.[illegible]	[illegible]	[illegible]
0.0	[illegible]	[illegible]	[illegible]	[illegible]
3.8	[illegible]	[illegible]	[illegible]	[illegible]
8.4	9.[illegible]	[illegible].30	9.45	9.1
93.0	90.[illegible]	90.50	93.[illegible]	93.5

[illegible]

PP=	'9513'	'[illegible]	'8955'	. '8969'	
0	0.[illegible]	[illegible]	0.[illegible]	[illegible]	[illegible].000
25	14.983333	14.9[illegible]	13.215789	13.4[illegible]	1.256202
75	43.400000	44.1[illegible]	39.647368	41.[illegible]	2.252654
100	60.966667	59.[illegible]	55.310526	57.680040	38.392311
125	74.[illegible]	73.988950	68.526316	70.620321	71.883897

THE [illegible] OF [illegible]

0.[illegible] [illegible]

#CHL.D 16R x 7C

Sample Readings

ppm	'9509'	'9513'	'0177'	'6955'	'6969'	'7389'
0.0	0.00	0.00	0.00	0.00	0.00	0.00
5.0	3.20	2.80	2.80	2.20	2.40	2.65
10.0	6.45	5.70	5.75	3.50	4.85	5.40
40.0	21.50	19.50	20.50	16.00	18.50	17.00
80.0	41.50	38.50	40.50	31.00	38.50	34.00
120.0	64.50	61.00	64.00	48.50	60.00	54.00
160.0	84.00	80.00	81.50	64.00	75.00	69.00
250.0	100.00	105.00	115.00	100.00	110.00	80.00
500.0	195.00	215.00	240.00	200.00	235.00	165.00
1000.0	370.00	425.00	475.00	405.00	460.00	315.00
0.0	0.00	0.00	0.00	0.00	0.00	0.00
3.8	4.70	4.55	4.40	3.55	3.45	4.40
8.4	9.50	9.00	10.00	7.65	8.00	8.50
93.0	91.00	96.00	98.00	86.00	87.50	91.00
498.0	380.00	495.00	540.00	505.00	500.00	410.00

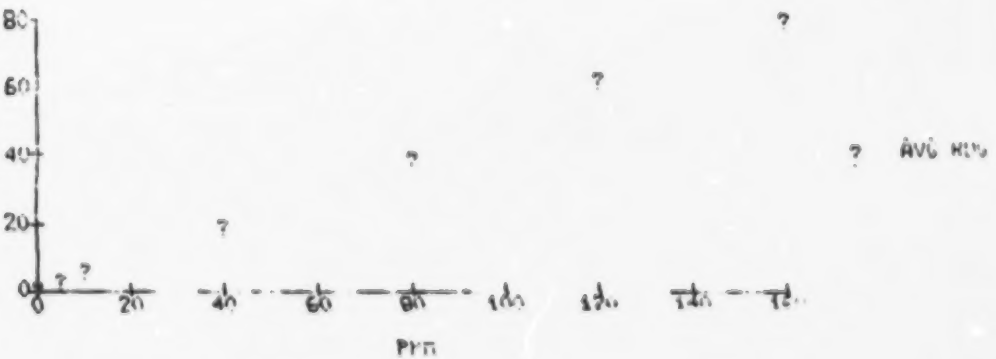
#CH1 DS1 7R x 8C

ppm	'9509'	'9513'	'0177'	'6955'	'6969'	? '7389'	
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5	3.270630	2.712500	2.652143	2.390000	2.558333	2.693443	2.710557
10	6.591758	5.521875	5.456633	3.784884	5.154357	5.488525	5.333089
40	21.972527	18.990625	19.464082	17.302326	19.660000	17.278689	19.033640
80	42.412088	37.296875	38.433673	33.523256	40.920000	34.557377	37.857217
120	65.917582	59.093750	60.734694	52.447674	63.771429	54.385246	59.479563
160	85.846154	77.500000	77.341837	69.209302	80.777143	70.639344	76.885630

THE ... FIT ...
0.9[illegible] 0.1[illegible]

C[illegible]

CHLOROFORM_1



#CH1 082 40 x 80

ppm	'9509'	'9513'	'0177'	'6958'	'6969'	'7389'	
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
250	102.336264	101.856562	109.280510	108.286047	117.072686	81.421639	103.375619
500	192.777214	208.563479	228.063673	216.572093	250.109829	167.932131	211.799480
1000	378.644176	412.226860	451.376030	439.669499	489.575586	320.897706	415.171606

THE EQUATION OF THE BEST FIT IS:
0.415796 *X +0.675822

#CH2_0 15R x 4C

OVA CHLOROFORM_1 DATA

ppm	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
5.5	2.9	3.0	2.6
10.9	6.8	7.0	6.0
32.7	17.0	18.0	18.0
81.8	46.0	47.0	47.0
136.9	70.0	72.0	74.0
139.9	70.0	73.0	75.0
272.6	130.0	145.0	156.0
545..	250.0	290.0	300.0
1090.4	490.0	565.0	590.0
0.0	0.0	0.0	0.0
8.4	10.0	8.3	8.1
93.0	92.0	86.0	92.5
498.0	510.0	485.0	58[illegible]

#CH[illegible] x 5C

Pi	'95[illegible]	'95[illegible]		
0.0	0.000000	0.000000	0.000000	0.000000
5.5	2.78[illegible]	3.244186	2.48[illegible]	2.834966
10.9	6.51[illegible]	7.569767	5.72[illegible]	5.604144
32.7	16.298969	19.465116	17.169231	17.641[illegible]
81.8	44.103093	50.825581	44.930769	46.586431
136.9	67.113402	77.860465	70.584615	71.852828
136.9	67.113402	78.941860	71.538462	72.631241

TH[illegible] DI[illegible]
0.5[illegible] 0.[illegible]

#CH2_DS2 4R x 5C

ppm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
272.6	174.808041	157.01[illegible]	149.046462	143.[illegible]
545.2	240.0[illegible]	314.029535	286.[illegible]	280.[illegible]
109[illegible]	479.[illegible]	611.[illegible]	564.[illegible]	54[illegible]

TH[illegible] DI[illegible] F[illegible]
0.5[illegible]

#CTFM_0 16P x 5C

PPM	9513	7'	'6955'	'6969'
0.0	0.00	0.00	0.00	0.0
40.0	6.05	5.50	5.75	5.4
60.0	9.55	8.55	7.10	7.8
150.0	19.50	18.00	16.50	18.0
300.0	39.00	36.50	34.00	36.0
450.0	58.00	56.00	54.00	54.0
600.0	76.50	74.50	72.00	71.5
750.0	100.00	98.00	96.50	94.0
1000.0	130.00	110.00	140.00	105.0
2000.0	260.00	220.00	270.00	215.0
0.0	0.00	0.00	0.00	0.0
3.8	4.70	4.40	2.70	4.0
8.4	9.00	9.60	7.90	9.2
93.0	94.50	93.00	92.00	93.5
498.0	540.00	475.00	600.00	480.0

#CTFM_OS1 7R x 6C

PPM	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000	0.000	0.000	0.0
40	5.953968	5.50	3.790761	5.371125	5.153963
60	9.398413	8.55	7.171134	7.758099	8.220960
150	19.136772	18.00	16.679348	17.903248	17.943392
300	37.396825	36.50	34.875000	35.807487	36.144828
450	57.079365	56.00	53.576087	53.711230	55.091670
600	76.285714	74.5	72.282609	71.117647	73.421493

The [illegible] of the [illegible] is
0.[illegible] 0.[illegible]

#CTFM_OS2 4R x 6C

PPM	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000	0.000000
750	98.546032	98.132774	96.668837	93.624	96.742911
1000	128.103774	110.149032	141.713378	104.580	121.139121
2000	256.211003	220.298065	278.365761	214.140	242.255877

The [illegible] of the [illegible] is
0.[illegible]X +1.982904

#CU_0 14R x 4C

OVA CUMENE_2 DATA

ppm	'9507'	'9509'	'9513'
0.0	0.00	0.0	0.0
5.4	8.25	8.8	7.4
10.9	14.50	16.0	16.0
27.2	37.00	42.0	42.0
54.5	72.00	[illegible]	[illegible]
81.7	105.00	125.0	125.0
136.1	160.00	200.0	205.0
272.3	365.00	440.0	465.0
435.1	630.00	740.0	790.0
0.0	0.00	[illegible]	[illegible]
8.4	[illegible]	[illegible]	3.3
93.0	93.50	[illegible]	99.0
498.0	490.00	490.0	560.0

#CU_0S1 5R x 5C

PP[illegible]	'9507'	[illegible]	'9513'	[illegible]
0.0	0.000000	0.000000	0.000000	0.000000
5.4	8.205882	9.088235	6.951515	8.0[illegible]
10.9	14.422460	16.533333	15.030303	15.328607
27.2	36.802139	43.400000	39.454545	39.085561
54.5	71.614973	82.666667	75.151515	76.427718

THE [illegible] OF [illegible]
1.40[illegible] [illegible]0.68[illegible]

#CU_0S2 5R x 5C

ppm	'9507'	'9509'	'9513'	
0.0	0.00	0.000000	0.000000	0.000000
81.7	104.58	129.341667	117.583333	117.168333
136.1	159.36	206.946667	192.836667	186.381111
272.3	363.54	456.282667	437.410000	418.744222
435.1	627.48	765.702667	743.126667	712.103111

THE [illegible] OF THE [illegible]
1.63[illegible]X [illegible]

#CU_HS 10R x 6C

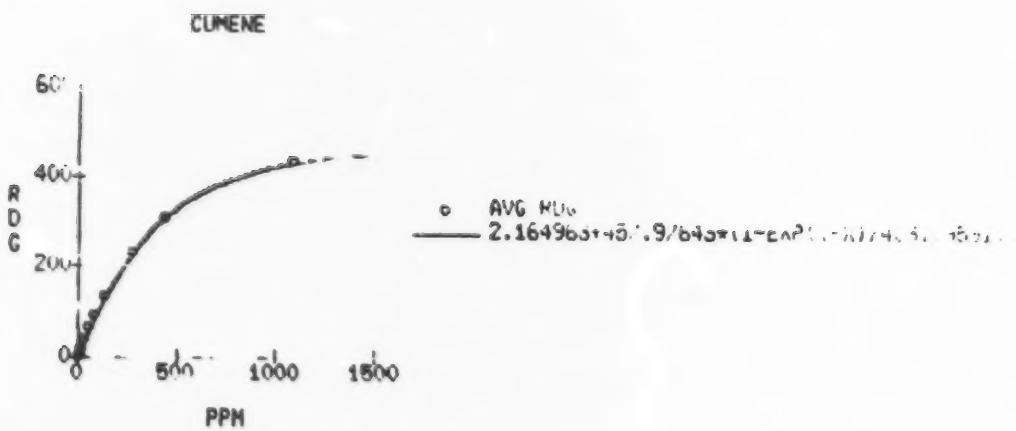
HRU CUMENE DATA

PPM	'82764'	'81470'	'82756'	'82757'
0.0	0.0	0.0	0.0	0.0
5.5	6.7	6.9	6.5	7.0
10.9	12.3	13.0	12.2	13.0
27.0	32.0	34.0	32.0	33.0
55.0	58.0	61.0	58.0	59.0
82.0	84.0	9[illegible]	[illegible]	84.[illegible]
136.[illegible]	[illegible]3.0	125.[illegible]	[illegible]	[illegible]0.0
2[illegible]	[illegible]	215.[illegible]	[illegible]	[illegible]
436.[illegible]	290.[illegible]	275.0	30[illegible]	285.0
1089.[illegible]	420.0	360.0	440.[illegible]	[illegible]
0.0	0.0	0.0	0.0	0.0
10.[illegible]	11.[illegible]	[illegible]	[illegible]	11.[illegible]
101.[illegible]	96.0	95.[illegible]	[illegible]	96.[illegible]
101.0	96.0	96.0	95.0	94.0
508.0	360.0	320.0	370.0	350.0

#CU_HS 10R x 6C

PPM	'82764'	'81470'	'82756'	'82757'	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
5.5	7.048958	7.259375	6.838542	7.442105	7.147245
10.9	12.940625	13.677083	12.835417	13.821053	13.318544
27.0	33.[illegible]	35.270833	33.[illegible]	35.094211	34.[illegible]
55.0	61.020833	64.177083	61.020833	62.726316	[illegible]
82.[illegible]	88.375000	91.[illegible]	89.427083	89.[illegible]	89.[illegible]
136.0	129.[illegible]	131.[illegible]	131.[illegible]	122.[illegible]	130.[illegible]
272.0	231.458333	226.197917	231.458333	223.263158	228.[illegible]
436.[illegible]	305.[illegible]	289.[illegible]	315.[illegible]	303.[illegible]	303.[illegible]
1089.0	441.875000	378.750000	462.916667	436.894737	429.[illegible]

#[illegible]



#C:...20 16R x 7C

Sa...le P...s...ngs

ppm	'9509'	'9513'	'0177'	'6955'	'6969'	'7389'
0.0	0.00	0.00	0.00	0.0	0.0	0.00
5.0	4.15	3.80	3.30	2.7	2.6	4.00
10.0	7.45	7.00	6.50	5.4	5.4	7.55
30.0	18.00	18.00	17.00	16.5	18.0	16.00
60.0	36.00	36.00	36.00	33.5	36.5	32.50
90.0	56.50	56.50	55.00	52.5	56.5	50.50
120.0	74.5	73.5	72.5	69.5	75.0	65.00
300.0	145.00	180.00	155.00	195.0	175.0	130.00
600.0	345.00	435.00	380.00	470.0	395.0	305.00
900.0	600.00	760.00	680.00	785.0	700.0	530.00
0.0	0.00	0.00	0.00	0.0	0.0	0.00
3.8	5.00	4.85	4.35	3.7	3.3	5.50
8.4	9.00	9.50	8.50	9.0	7.7	9.50
93.0	91.00	97.50	94.50	100.5	94.0	95.00
490.0	380.00	500.00	475.00	530.0	485.0	410.00

#C:...381 7R x 8C

Ppm	'9509'	'9513'	'0177'	'6955'	'6969'	'7389'	
0	0.000000	0.000000	0.000000	0.000	0.000000	0.000000	0.000000
5	4.241209	3.624615	3.247619	2.511	2.572340	3.915789	3.352096
10	7.613736	6.676923	6.396825	5.022	5.342553	7.391053	6.407182
30	18.398604	17.169231	16.730153	15.345	17.808511	15.663158	16.961441
60	36.791209	34.338462	35.428571	31.155	36.111702	31.915789	34.276456
90	57.791758	53.833308	54.126984	48.819	56.329787	49.178948	53.320305
120	76.137363	71.[illegible]	71.345[illegible]	64.[illegible]	[illegible]	[illegible]	69.839695

The [illegible] of the [illegible]
0.5[illegible] 0.[illegible]

#C:...382 4R x 8C

Pp	'9509'	'9513'	'0177'	'6955'	'6969'	'7389'	
0	0.000000	0.000000	0.000000	0.0000	0.000000	0.000000	0.0
300	148.[illegible]	171.924923	162.[illegible]	191.5957	174.[illegible]	127.4359[illegible]	160.[illegible]
60	[illegible]	415.[illegible]	3[illegible].4[illegible]921	409.[illegible]	[illegible]	294.082105	3[illegible]
900	614.[illegible]	726.[illegible]	6[illegible]	731.[illegible]	693.[illegible]	519.[illegible]	659.[illegible]

The [illegible] of the [illegible]
0.[illegible] [illegible]

#C[illegible] x 4C

OVA CYCLOHEXANE DATA

PPM	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
5.4	3.7	4.5	3.5
27.2	16.5	20.5	18.0
54.6	32.0	40.5	37.0
109.1	71.0	86.5	80.0
217.8	145.0	170.0	185.0
326.7	240.0	290.0	310.0
545.5	425.0	520.0	[illegible]
981.4	9[illegible]	1000.0	1000.[illegible]
0.0	0.0	0.0	0.0
8.4	8.9	9.6	8.0
93.0	88.0	94.0	94.0
498.0	490.0	520.0	[illegible].0

#CY2 OS1 5R x 5C

PPM	'950[illegible]	'9509'	'951[illegible]	
0.0	0.000000	0.000[illegible]	0.000000	0.000[illegible]
5.4	3.910227	4.452178	3.462766	3.941707
27.2	17.437500	20.781915	17.808511	18.[illegible]
54.6	35.818182	40.069149	36.000000	36.831238
109.1	75.034091	85.579787	79.1[illegible]	79.920938

[illegible]
0.[illegible]X [illegible]

#C[illegible] 5R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.00000	0.000000	0.000000	0.000000
217.8	153.44625	168.419362	183.279894	168.381835
326.7	253.98000	287.303617	307.117660	282.800426
545.5	419.75625	515.165106	554.793191	506.[illegible]
981.4	994.76500	990.702128	[illegible].702128	992.05[illegible]

[illegible]
1.0[illegible]

#C[illegible]

HN[illegible]

PPM	'82/64'	'81470'	'82/56'	'82767'
0.0	0.0	[illegible]	0.0	[illegible]
5.5	2.4	2.5	2.1	2.7
27.0	10.3	10.7	9.8	11.6
55.0	18.8	21.0	18.5	22.0
109.[illegible]	[illegible]	[illegible]	[illegible]	
218.[illegible]	[illegible]		[illegible]	
3[illegible]	[illegible]	101.[illegible]	[illegible]	
545.0	1[illegible]	138.0	12[illegible]	1[illegible]
980.0	163.0	182.0	165.[illegible]	194.[illegible]
0.[illegible]	[illegible]		0.0	
10.[illegible]	11.[illegible]	[illegible]	10.[illegible]	
101.0	96.0	106.0	92.0	99.0
508.0	370.0	380.0	360.0	350.0

#CV_HS 99 v 60

PP	'82764'	'8147[illegible]	'[illegible]	'8[illegible]	
0.0	0.[illegible]	0.00[illegible]	[illegible]	0.0[illegible]	0.[illegible]
5.5	2.525000	2.382075	2.305435	2.754545	2.491764
27.0	10.836458	10.195283	10.758696	11.834343	10.906195
55.0	19.779167	20.009434	20.309783	22.444444	20.635702
109.0	39.979167	40.018868	40.619565	41.828283	40.611471
218.0	68.385417	68.607774	71.358696	72.434343	70.195557
3[illegible]	95.[illegible]39583	96.[illegible]5949	98.804348	106.[illegible]	99.220198
545.0	129.406250	131.490566	135.[illegible]	153.030303	132.239932
980.[illegible]	[illegible].489583	173.[illegible]	181.141304	197.[illegible]	180.991293

R[illegible]

0.1[illegible] [illegible] [illegible] 6[illegible]

#DBM_0 14R x 4C

OVA 1,2-DIBROMOETHANE DATA

PPM	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
5.4	3.6	3.5	3.2
16.3	9.5	9.5	8.6
54.3	31.0	32.5	34.0
108.7	59.0	62.0	65.5
163.0	92.0	95.0	100.0
326.8	180.0	200.0	230.0
653.6	400.0	440.0	500.0
981.6	650.0	695.0	810.0
0.0	0.0	0.0	0.0
8.4	9.3	8.6	8.1
33.0	32.0	32.0	32.0
498.0	485.0	490.0	590.0

#D- x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
5.4	3.639130	3.652303	3.000000	3.434165
16.3	9.603261	9.326087	8.913043	8.706522
54.3	31.336957	32.956594	31.939394	32.417241
108.7	59.641304	64.786517	61.530303	61.986041
163.0	93.000000	99.269663	93.939394	95.405019

THE [illegible]
0.[illegible] 0.[illegible]

#DBM_OS2 4R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
326.8	182.203043	209.271910	216.353333	202.609429
653.6	404.898652	460.398202	470.333333	445.209063
981.6	657.955435	727.219888	761.940000	715.705107

THE [illegible]
0.[illegible]

#DBM_MS [illegible] x 5C

HNU [illegible]-DIBROMO[illegible] A

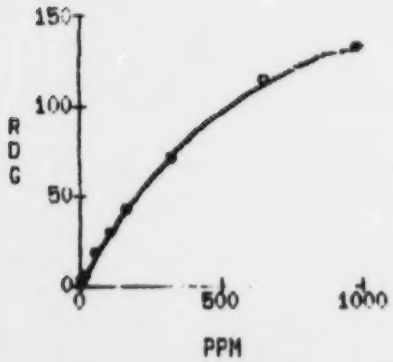
PPM	'32764	'81470'	'82756'	'82757'
0.00	0.0	0.0	0.0	0.0
5.45	1.9	1.9	1.8	2.1
16.40	4.2	4.7	4.3	5.4
55.00	13.5	16.4	14.5	19.3
109.00	24.0	29.0	26.0	35.0
163.00	36.0	43.0	38.0	50.0
327.00	59.0	72.0	65.0	82.0
653.00	91.0	113.0	100.0	132.0
980.00	107.0	132.0	117.0	153.0
0.00	0.0	0.0	0.0	0.0
10.00	11.4	11.5	10.8	11.7
10.00	11.2	11.6	10.7	13.1
10[illegible]	96.[illegible]	3[illegible]	[illegible]	9[illegible]
101.00	35.0	100.0	96.0	106.0
808.00	350.0	340.0	370.0	390.0

#DBM_MS QP x 5C

ppm	'82764'	'81470'	'82756'	'82757'	
0.00	0.000000	0.000000	0.000000	0.000000	0.0[illegible]
5.45	1.903665	1.938384	1.893750	2.069268	1.951267
16.40	4.441885	4.794949	4.523958	5.320976	4.770442
55.00	14.277487	16.731313	15.266208	19.017661	16.320392
109.00	25.382199	29.585859	27.[illegible]	34.[illegible]	29.[illegible]
163.00	38.073298	43.868687	39.[illegible]	49.[illegible]	42.[illegible]
327.00	62.[illegible]	73.[illegible]	59.[illegible]	80.[illegible]	71.[illegible]
653.00	96.240838	115.282828	105.208333	134.995122	117.931780
980.00	113.162304	134.666667	123.093750	150.760976	130.420924

#-DBM_MS

DIBROMOETHANE



o AVG RDG

—— 0.106402+153.640058*(1-EXP(-A/509.80976))

#DCB_0 15R x 4C

OVA 1,2-DICHLOROBENZENE DATA

PPM	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
5.4	10.1	12.5	10.0
10.9	18.0	24.0	19.5
21.8	37.0	50.0	41.0
43.5	78.0	100.0	81.0
87.0	150.0	200.0	180.0
130.5	230.0	310.0	275.0
217.4	350.0	515.0	475.0
434.9	770.0	1000.0	1000.0
0.0	0.0	0.0	0.0
8.4	9.2	10.1	9.0
93.0	91.5	110.0	98.5
498.0	490.0	620.0	590.0
498.0	505.0	640.0	640.0

#DCB_OS1 5R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
5.4	10.265574	10.568182	9.441624	10.091793
10.9	18.295082	20.290909	18.411168	18.999053
21.8	37.606552	42.272727	38.710660	39.529983
43.5	79.278689	84.545455	76.477157	80.100433

THE [illegible] OF [illegible]
1.8[illegible]

#DCB_OS2 5R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
87.0	152.459016	169.090909	169.949239	163.833055
130.5	233.770492	262.090909	259.644670	251.833357
217.4	355.737705	435.409091	448.477157	413.207984
434.9	785.622951	845.454545	944.162437	857.413311

THE [illegible] OF [illegible]
1.9[illegible] 6.[illegible]

HNU 1,2-DICHLOROBENZENE DATA

PPM	'82764'	'81420'	'82756'	'82757'
0.00	0.0	0.0	0.0	0.0
5.45	6.9	7.6	7.1	8.5
10.90	12.3	13.8	13.2	15.4
22.00	26.0	28.0	28.0	32.0
44.00	52.0	57.0	57.0	61.0
87.00	90.0	102.0	101.0	113.0
131.00	129.0	146.0	146.0	160.0
218.00	177.0	200.0	200.0	210.0
436.00	300.0	320.0	330.0	350.0
0.00	0.0	0.0	0.0	0.0
10.00	9.9	10.7	10.4	12.3
101.00	86.0	94.0	94.0	102.0
101.00	86.0	94.0	94.0	96.0
508.00	330.0	320.0	360.0	360.0

MDCB_HS 98 x 6C

PPM	'82764'	'81420'	'82756'	'82757'	
0.00	0.000000	0.000000	0.000000	0.000000	0.000000
5.45	8.103488	8.165967	7.628723	8.671717	8.142472
10.90	14.445349	14.827660	14.182979	15.711111	14.791775
22.00	30.534884	30.085106	30.085106	32.646465	30.837890
44.00	61.069767	61.244681	61.244681	62.232323	61.4[illegible]
87.00	108.697674	109.595745	108.521277	115.282828	109.774381
131.00	151.500000	156.872340	156.872340	163.232323	157.[illegible]
218.00	207.872093	214.893617	214.893617	214.242424	212.975438
436.00	352.325581	343.829787	354.574468	357.070707	351.950136

#DCOFM_0 15R x 5C

Sample Readings

ppm	'9513'	'0177'	'6955'	'6969'
0.0	0.00	0.00	0.00	0.00
40.0	4.80	4.85	3.95	4.60
75.0	10.00	9.40	8.00	8.80
200.0	23.00	21.50	20.00	20.00
400.0	44.00	41.50	39.50	40.00
600.0	68.00	64.00	62.00	62.00
800.0	94.00	87.00	84.00	83.50
1000.0	100.00	90.00	105.00	90.00
2000.0	210.00	190.00	225.00	190.00
0.0	0.00	0.00	0.00	0.00
3.8	4.35	4.55	3.85	4.35
8.4	9.60	10.00	9.20	9.60
93.0	100.00	96.00	105.00	93.50
498.0	540.00	495.00	605.00	495.00

#DCOFM.0S1 7R x 6C

ppm	'9513'	'0177'	'6955'	'6969'	
0	0.000	0.000000	0.000000	0.000000	0.000000
40	4.464	4.698437	3.498571	4.575401	4.309102
75	9.300	9.106250	7.085714	8.752941	8.561226
200	21.390	20.828125	17.714286	19.893048	19.956365
400	40.920	40.203125	34.985714	39.786096	38.973734
600	63.240	62.000000	54.914286	61.668449	60.455684
800	87.420	84.281250	74.400000	93.053475	82.288691

THE [illegible]
0. [illegible] 0.[illegible]

#DCOFM.0S2 3R x 6C

ppm	'9513'	'0177'	'6955'	'6969'	
0	0.0	0.0000	0.000000	0.000000	0.000000
1000	93.0	87.1875	93.000000	89.518717	90.676554
2000	195.3	184.0625	199.285714	188.983957	191.908043

THE [illegible]
0.[illegible]

#DCE_0 16R x 4C

DVA [illegible] CHLOROFORM Data

PPm	'9507'	'9509'	'9513'
0.0	0.00	[illegible]	0.00
5.4	5.[illegible]	[illegible]	5.10
9.8	9.[illegible]	9.1	8.75
27.2	[illegible]	22.0	24.[illegible]
54.4	46.00	[illegible]	[illegible]
87.2	70.00	80.[illegible]	75.50
108.8	89.[illegible]	35.[illegible]	95.00
217.6	165.00	170.0	200.00
326.9	230.00	250.0	290.00
544.0	395.00	425.0	495.[illegible]
0.0	[illegible].00	0.0	0.00
3.8	4.65	4.2	4.30
8.4	10.00	9.1	9.20
93.0	95.00	84.5	99.00
498.0	495.00	470.0	580.00

#DCE_0S1 7R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
5.4	5.433158	5.833136	4.790909	5.352401
9.8	9.055263	10.015385	8.219697	9.096782
27.2	21.536842	24.213018	22.545455	22.765105
54.4	45.031579	48.426036	46.030303	46.495972
87.2	68.526316	74.840237	70.924242	71.430265
108.8	87.126316	94.100592	89.242424	90.[illegible]

THE [illegible]

0. [illegible] 0. [illegible]

#DCE_0S2 4R x 5C

PPM	'950[illegible]	'9509'	'951[illegible]	
0.0	0.000000	0.000000	0.000000	0.000000
217.6	161.526316	187.100592	187.878788	178.835232
326.9	225.157895	275.147929	272.424242	257.576689
544.0	366.684211	467.751479	465.000000	439.[illegible]

THE [illegible] OF [illegible]

0.[illegible] 0.[illegible]

#DCFM.D 10R x 5C

Sample Readings

ppm	'9513'	'0177'	'6955'	'6969'
0.0	0.00	0.0	0.00	0.00
30.0	13.50	13.0	12.50	13.50
60.0	40.00	40.0	38.00	42.00
100.0	60.50	62.5	60.00	64.50
125.0	80.00	79.5	77.00	81.50
0.0	0.00	0.0	0.00	0.00
3.8	4.55	4.4	3.80	4.20
8.4	9.60	9.3	9.15	9.35
93.0	88.00	89.5	95.00	93.50

#DCFM_DS1 5R x 6C

PPM	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
30	14.267045	13.508380	12.236842	13.427807	13.360019
60	42.[illegible]	41.564246	37.[illegible]	41.775401	40.703094
100	63.937500	64.944134	58.[illegible]	64.155080	62.943389
125	84.345455	82.608939	75.378947	81.064171	80.899378

THE [illegible] IN D[illegible]

0.[illegible] 1.[illegible]

#DMA1_0 15R x 5C

ppm	'9513'	'0177'	'6955'	'6969'
0.0	0.00	0.00	0.00	0.00
10.0	2.95	2.85	2.70	2.80
25.0	8.80	8.60	7.20	7.05
60.0	20.00	18.00	20.00	19.00
125.0	50.00	42.50	43.50	38.50
175.0	68.00	60.00	65.00	62.00
225.0	105.00	85.50	79.00	66.00
500.0	215.00	170.00	240.00	180.00
1000.0	520.00	400.00	515.00	410.00
0.0	0.00	0.00	0.00	0.00
3.8	5.00	6.20	3.65	4.80
8.4	9.50	11.00	8.35	9.90
93.0	92.00	97.00	96.00	100.00
498.0	520.00	465.00	600.00	515.00

#DMA1_0S1 7R x 6C

ppm	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.0000	0.000000
10	2.982065	2.732474	2.615625	2.6040	2.733541
25	8.895652	8.245361	6.975000	6.5565	7.668128
60	20.217391	17.257732	19.375000	17.6700	18.630081
125	50.543478	40.747423	42.140625	35.8050	42.309131
175	68.739130	57.525773	62.968750	57.6600	61.723413
225	106.141304	81.974227	76.531250	61.3800	81.506695

#DMA1_0S2 3R x 6C

ppm	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.00000	0.0	0.000000
500	217.33695?	162.98	232.50000	167.4	225.056662
1000	525.652174	383.505155	498.90625	381.3	447.340895

#DMA1 H 149 x 50

PPm	'81428'	'81469'	'81470'	'82764'	
0	0.0	0.0	0.0	0.0	
10	1.8	0.2	0.2	0.2	
25	8.0	3.4	6.1	6.4	
60	16.2	11.4	8.2	19.6	
125	42.0	33.0	33.0	34.0	
175	58.0	56.0	45.0	45.0	
225	80.0	75.0	65.0	53.0	
500	180.0	194.0	185.0	189.0	
1000	280.0	310.0	300.0	320.0	
0	0.0	0.0	0.0	0.0	
10	10.6	12.0	12.4	11.6	
101	102.0	108.0	102.0	100.0	
508	350.0	380.0	380.0	380.0	

#DMA1_HS 98 x 60

ppm	'81428'	'81469'	'81470'	'82764'	
0	0.000000	0.000000	0.000000	0.000	0.000000
10	1.782353	0.187037	0.198039	0.202	0.592357
25	7.921569	3.179630	6.040196	6.464	5.901349
60	16.041176	10.661111	8.119608	19.796	13.654474
125	41.588235	30.861111	32.676471	34.340	34.866454
175	57.431373	52.370370	44.558824	45.45	49.352642
225	79.215686	70.138889	64.362745	53.530	66.811830
500	178.235294	181.425926	183.186275	190.890	183.434374
1000	277.254902	289.907407	297.058824	323.200	296.855283

#DMA2_0 15R x 5C

C	Ppm	'9513'	[illegible]	'6956'	[illegible]
	0.0	0.00	0.00	0.00	0.00
	10.0	3.20	1.80	2.50	2.40
	25.0	11.50	5.10	8.40	7.90
	50.0	22.00	17.00	20.00	18.00
	100.0	55.00	36.50	40.00	32.00
	150.0	70.50	60.50	62.00	55.50
	200.0	120.00	95.00	90.00	73.00
	500.0	240.00	180.00	205.00	185.00
	800.0	460.00	320.00	300.00	240.00
	0.0	0.00	0.00	0.00	0.00
	3.8	4.65	4.15	3.00	4.05
	8.4	10.00	10.00	7.55	8.85
	93.0	100.00	92.00	92.50	92.00
	498.0	520.00	450.00	510.00	480.00

#DMA[illegible] 3R x 6C

Ppm	'9513'	'0172'	'6956'	[illegible]	[illegible]
0	0.000	0.000000	0.000[illegible]	[illegible]	0.000[illegible]
10	2.976	1.725[illegible]	[illegible]	2.429[illegible]	[illegible]
25	10.695	4.889691	8.013[illegible]	7.985870	7.89[illegible]
50	20.490	16.298969	19.076923	18.195652	18.507986
100	51.150	34.994845	38.153846	32.347826	39.161629
150	65.565	58.[illegible]135	59.138462	56.103261	59.702969
200	111.600	91.082474	85.846154	73.793478	90.580527

THE [illegible] OF THE MEAN FILE IS
0.[illegible] [illegible] 2.[illegible]

#DMA2_0S2 3R x 6C

Ppm	'9513'	'0172'	'6956'	'6969'	
0	0.0	0.000000	0.000000	0.000000	0.000000
500	223.2	172.5[illegible]320	195.538462	187.010870	194.581663
800	427.8	306.804124	286.153846	242.608696	315.841666

THE [illegible] OF [illegible] FILE IS
0.[illegible] *X - 0.[illegible]

#DMAZ_H 14R x 5C

ppm	'81428'	'81469'	'81470'	'82764'
0	0.0	0.0	0.0	0.0
10	3.4	0.2	2.6	1.6
25	9.8	2.6	6.0	6.3
50	22.0	13.0	15.8	15.4
100	42.0	30.0	28..	32.0
150	62.0	54.0	67.0	63.0
200	102.0	75.0	94.0	83.0
500	172.0	166.0	220.0	176.0
800	220.0	200.0	260.0	190.0
0	0.0	0.0	0.0	0.0
10	9.6	11.2	14.2	11.6
101	100.0	92.0	108.0	100.0
508	320.0	320.0	410.0	390.0

#DMAZ_H6 9R x 6C

ppm	'81428'	'81469'	'81470'	'82764'	
0	0.000	0.0[illegible]	0.000[illegible]	0.[illegible]	0.[illegible]
10	3.434	0.219565	2.431481	1.616	1.925[illegible]
25	9.898	2.744565	5.611111	6.363	6.154169
50	22.220	14.271739	14.7[illegible]926	15.554	16.705416
100	42.420	32.934783	26.185185	32.320	33.464992
150	62.620	59.282609	62.657407	63.630	62.047504
200	103.020	92.336957	78.[illegible]	83.930	96.[illegible]
500	173.720	182.239130	205.[illegible]	177.760	184.[illegible]
800	222.200	219.565217	243.148148	191.900	219.203341

#DME_O 15R x 4C

' ppm	'9513'	6955'	'6969'
0.0	0.00	0.00	0.0
10.0	1.55	1.05	1.5
40.0	5.95	4.90	6.3
150.0	19.50	18.50	22.0
300.0	38.50	39.50	47.0
450.0	65.00	62.50	73.0
600.0	87.00	86.50	100.0
900.0	120.00	135.00	125.0
2000.0	320.00	350.00	335.0
0.0	0.00	0.00	0.0
3.8	4.20	3.40	3.7
8.4	9.60	8.15	8.5
93.0	92.00	97.50	91.5
498.0	515.00	600.00	480.0

#DME_OS1 3R x 5C

PPM	'9513'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000000
10	1.566848	1.001538	1.524590	1.364325
40	6.014674	4.673846	6.403279	5.697266
150	19.711957	17.646154	22.360656	19.3[illegible]
300	38.918478	37.676923	47.770492	41.455298
450	65.706522	59.615385	74.196721	66.506209
600	87.945652	82.507692	101.639344	90.697827

THE [illegible] OF THE WEST FIL[illegible]
0.19[illegible] 0.3[illegible]

#DME_OS2 3R x 5C

PPM	'9513'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000000
900	121.304348	128.769231	127.049180	125.707586
2000	323.478261	333.846154	340.491803	332.605406

THE [illegible] OF THE WEST FIL[illegible]
0.1[illegible] 8.79[illegible]

#DME_H 24R x 6C

ppm	'81428'	'81469'	'81470'	'82764'
0	0.0	0.0	0.0	0.0
10	2.6	2.4	2.6	2.0
40	9.4	9.1	9.5	7.2
150	29.0	32.0	33.0	26.0
300	56.0	57.0	60.0	48.0
450	86.0	86.0	91.0	76.0
600	104.0	107.0	112.0	95.0
900	138.0	136.0	144.0	122.0
2000	240.0	220.0	250.0	220.0
0	0.0	0.0	0.0	0.0
10	10.6	11.2	12.2	11.6
101	100.0	102.0	105.0	102.0
508	310.0	320.0	380.0	380.0

#DME_HS 9R x 6C

ppm	'81428'	'81469'	'81470'	'82764'	
0	0.000	0.000000	0.000000	0.000000	0.000000
10	2.626	2.376471	2.500952	1.980392	2.370954
40	9.494	9.010784	9.138095	7.129412	8.693073
150	29.290	31.686275	31.742857	25.745098	29.616057
300	56.560	56.441176	57.714286	47.529412	54.561218
450	86.860	85.156863	87.533333	75.254902	83.701275
600	105.040	105.960980	107.733333	94.068627	103.198236
900	139.380	134.666667	138.514286	120.803922	133.341218
2000	242.400	217.843137	240.476190	217.843137	229.640616

RL
0.5 8. EXT

#EOLLO 4R x 4C

OVA ETH[illegible] Data

PPM	'9507'	'9509'	'9513'
0.0	0.00	0.00	0.00
21.8	5.50	6.80	5.50
54.4	12.00	13.50	13.00
163.0	38.00	43.00	43.00
326.0	76.00	86.00	85.50
543.4	125.00	145.00	150.00
1088.7	265.00	320.00	335.00
2173.6	610.00	725.00	770.00
0.0	0.00	0.00	0.00
3.8	4.35	4.55	4.25
8.4	9.85	9.95	9.30
93.0	97.00	94.50	105.00
498.0	500.00	530.00	605.00

#EOL_OS1 5R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
21.8	5.[illegible]	6.692063	4.8[illegible]	[illegible]
54.4	11.505155	13.285[illegible]	11.514286	12.101[illegible]
163.0	36.43[illegible]	42.41[illegible]	39.[illegible]	8.[illegible]
326.0	72.865979	84.634921	75.7285[illegible]	77.743157

TH[illegible] OF [illegible]
0.[illegible] C.[illegible]

#EF[illegible] 5R x 5C

PPM	'9507'	'9509'	'9513'	5
0.0	0.000000	0.000000	0.000000	0.000000
543.4	119.845361	142.698413	132.857143	131.800305
1088.7	254.072165	314.920635	296.714286	288.569029
2173.6	584.845361	713.492063	682.[illegible]	660.112475

THE [illegible] OF [illegible]
0.[illegible] 21.[illegible]

#E.C. .49 x 50

HNU ETHANOL DATA

Pnt	82764	81470	8. 68	8270
0	0.0	0.0	0.0	0.0
22	0.8	0.8	0.8	1.0
55	2.0	1.9	1.9	2.3
163	5.7	5.9	5.5	6.6
327	10..	11.0	9.9	11.8
545	15.6	17.1	15.3	18.3
1089	28.0	31.0	27.0	32.0
2178	40.0	45.0	38.0	47.0
0	0.0	0.0	0.0	0.0
10	11.1	11.1	10.6	11.5
10	11.2	11.1	10.6	11.2
101	96.0	95.0	95.0	95.0
101	96.0	96.0	95.0	92.0

#EC.EAC 3R x 50

P	R.764	81470	8. 68	82 8	
0	0.000000	0.000000	0.000000	0.000000	0.000000
22	0.841667	0.946073	0.850526	1.080214	0.904620
55	2.104167	2.009424	2.020000	2.484492	2.154521
163	5.996875	6.239791	5.847368	7.129412	6.307361
327	10.731250	11.633508	10.525263	12.746524	11.409136
545	16.307292	18.084817	16.206316	19.767914	17.606585
1089	29.458333	32.785340	28.405263	34.556945	31.389463
2178	42.083333	47.591623	40.400000	50.770053	45.211257

R[illegible] IS
[illegible]

#E_0 15R x 5C

Sample Readings

ppm	'3513'	'0177'	'6955'	'6969'
0.0	0.0	0.00	0.00	0.0
10.0	4.6	5.65	4.05	[illegible]
15.0	6.8	8.45	6.00	7.1
30.0	12.5	12.00	11.00	12.5
100.0	42.5	44.50	40.00	42.5
150.0	64.0	63.50	58.00	61.5
200.0	93.5	91.00	84.50	87.0
400.0	180.0	160.00	185.00	165.0
800.0	440.0	360.00	415.00	375.0
0.0	0.0	0.00	0.00	0.0
3.8	4.1	5.40	3.60	5.1
8.4	9.7	10.00	8.65	9.8
93.0	100.0	98.00	92.00	93.0
498.0	570.0	460.00	560.00	495.0

#E_OS1 3R x 6C

ppm	'3513'	'0177'	'6955'	'6969'	
0	0.000	[illegible]	0.00	[illegible]	0.000000
10	4.274	[illegible]	4.094027	5.1	4.[illegible]434
15	6.304	8.[illegible]	6.065421	7.1	6.[illegible]
30	[illegible]	[illegible]	11.[illegible]	[illegible]	[illegible]
100	39.525	42.[illegible]	40.434783	42.5	4[illegible]2344
150	59.370	60.260204	58.[illegible]	61.5	59.9[illegible]
200	86.[illegible]	86.[illegible]	85.41847[illegible]	[illegible]	86.[illegible]

[illegible]
0.[illegible]

#E_OS2 3R x 6C

PP	'3513'	'01[illegible]	'6[illegible]	'696[illegible]	
0	0.0	0.000000	0.00000	[illegible]	0.0
400	167.4	151.836735	187.010887	165	167.811901
800	409.2	341.632653	419.51087	375	386.335801

[illegible]
0.4[illegible]

#EO_0 15R x 5C

Sample Readings

ppm	'9513'	'0177'	'6955'	'6969'
0.0	0.0	0.0	0.00	0.00
10.0	4.3	4.2	3.65	4.40
20.0	8.9	8.6	7.85	9.10
50.0	20.5	20.5	19.00	22.00
100.0	41.0	41.0	40.00	46.00
150.0	64.5	65.5	64.00	72.00
200.0	93.0	90.0	89.50	100.00
400.0	165.0	150.0	190.00	160.00
800.0	400.0	360.0	440.00	380.00
0.0	0.0	0.0	0.00	0.00
3.8	4.8	4.6	4.15	4.85
8.4	9.5	10.0	9.85	10.00
93.0	96.5	94.0	100.00	95.00
498.0	550.0	490.0	645.00	515.00

#EO_OS1 7R x 6C

ppm	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000	0.000000	0.000000
10	4.144041	4.155619	3.3945	4.307368	4.000307
20	8.577202	8.508511	7.3005	8.908421	8.324658
50	19.756470	20.261315	17.6700	21.536842	19.811360
100	39.512953	40.563830	37.2000	45.031579	40.577091
150	62.160622	64.803191	59.5200	70.484211	64.242006
200	89.626943	89.042553	83.2350	97.894737	89.949809

THE [illegible] OF THE REST FIT IS
0.443[illegible] 1.[illegible]

#EO_OS2 3R x 6C

ppm	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.0	0.000000	0.000000
400	159.015544	148.404255	176.7	156.631579	160.187945
800	385.492228	356.170213	409.2	372.000000	380.715610

THE [illegible]ATION OF THE REST FIT IS
0.[illegible] 10.[illegible]

WEB_D 14R x 4C

OVA ETHYL BENZENE DATA

PPM	'9507'	'9509'	'9513'
0.0	0.0	0.00	0.0
5.4	7.2	7.70	6.4
10.9	13.0	15.00	14.0
32.6	40.0	45.00	44.0
65.2	80.[illegible]	86.50	87.0
94.5	110.0	130.00	135.0
163.1	200.0	230.00	250.0
272.1	340.0	400.00	430.0
544.3	810.0	930.00	1020.0
0.0	0.0	0.00	0.0
8.4	9.6	9.05	8.3
93.0	94.0	90.00	99.0
498.6	430.0	495.00	586.[illegible]

WEB_DS1 5R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000[illegible]
5.4	7.123404	7.966667	6.012121	7.030731
10.9	12.861702	15.500000	13.151515	13.837739
32.6	39.574468	46.500000	41.333333	42.469267
65.2	79.148936	89.333333	81.727273	83.419847

[illegible]

WEB_DS2 5R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
94.5	108.829787	134.333333	126.818182	123.327101
163.1	[illegible]97.872340	237.666667	234.848485	223.450497
272.1	336.382979	413.333333	403.939394	384.[illegible]
544.3	801.382979	961.000000	958.181818	906.854932

[illegible]

#EB_H 16R x 5C

HNU ETHYL BENZENE DATA

PPM	'82764'	'81470'	'82756'	'8275?
0.00	0.0	0.0	0.0	0.0
5.45	6.7	6.5	6.3	6.7
10.90	13.3	13.2	12.4	13.1
33.00	40.0	40.0	39.0	40.0
65.00	73.0	72.0	70.0	70.0
95.00	101.0	102.0	98.0	97.0
163.00	159.0	154.0	159.0	153.0
272.00	240.0	220.0	240.0	230.0
545.00	360.0	320.0	370.0	350.0
1089.00	460.0	390.0	480.0	460.0
0.00	0.0	0.0	0.0	0.0
10.00	11.2	10.8	10.6	11.6
101.00	97.0	94.0	95.0	96.0
101.00	96.0	93.0	95.0	94.0
508.00	360.0	310.0	370.0	350.0

#EB HS 10R x 6C

PPM	'82764'	'81470'	'82756'	'82757'	[illegible]
0.00	0.000000	0.000000	0.000000	0.000000	0.000000
5.45	7.012435	7.021390	6.697896	7.123158	6.963720
10.90	13.920207	14.258824	13.183158	13.927368	13.822389
33.00	41.865285	43.306500	41.457159	42.5[illegible]	42.265829
65.00	76.404145	77.775401	74.421053	74.421053	75.755413
95.00	105.709845	110.181818	104.189474	103.126316	105.801863
163.00	166.414508	166.352941	169.042105	162.663158	166.118178
272.00	251.191710	237.647059	255.157895	244.526316	247.130745
545.00	376.787565	345.668449	393.368421	372.105263	371.982425
1089.00	481.450777	421.283422	510.315789	489.052632	475.525655

[illegible]
1.7[illegible] 0.[illegible] 9[illegible]

#EH_O 10R x 4C

OVA ETHYL HEXANOL DATA

PPM	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
5.4	3.6	4.1	3.3
10.9	7.7	8.0	7.2
32.6	20.5	26.0	23.0
65.3	44.5	52.0	48.0
108.8	76.0	89.0	80.0
0.0	0.0	0.0	0.0
8.4	9.7	8.7	8.1
93.0	96.5	92.5	95.5

#EH[illegible] 5C

PPM	'950[illegible]	'9509'	'951[illegible]'	
0.0	0.000000	0.000000	0.000000	0.000000
5.4	3.469430	4.122162	3.21[illegible]	3.601.35
10.9	7.420725	8.043243	7.011518	7.49[illegible]
32.6	19.756477	26.140541	22.397906	22.764974
65.3	42.880021	52.281081	45.[illegible]	47.303516
108.8	73.243523	89.481081	77.905759	80.210121

THE [illegible] OF THE BEST FIT IS
0.[illegible]

#EH_H 12R x 5C

HNU ETHYL HEXANOL DATA

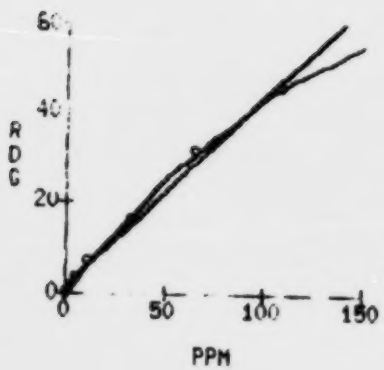
PPM	'82764'	'81470'	'82756'	'82757'
0.00	0.0	0.0	0.0	0.0
5.45	2.9	2.8	2.9	3.3
10.90	5.8	6.1	5.9	6.5
33.00	14.1	16.1	15.2	16.5
65.00	26.0	31.0	29.0	31.0
109.00	36.0	46.0	42.0	44.0
0.00	0.0	0.0	0.0	0.0
10.00	11.2	11.1	10.8	11.8
10.00	10.4	11.1	10.8	11.[illegible]
101.00	96.0	96.0	96.0	95.
101.00	83.0	96.0	96.0	94.0

#EH_LG 12R x 5C

PPM	'82764'	'81470'	'82756'	'82757'	
0.00	0.000000	0.000000	0.000000	0.000000	0.000000
5.45	3.272626	2.945833	3.051042	3.526984	3.199121
10.90	6.545251	6.417708	6.207292	6.947090	6.509339
33.00	17.311732	16.938542	15.991667	17.674479	16.614218
65.00	28.212791	32.614583	30.510417	33.130208	31.117391
109.00	40.629688	43.996833	44.187500	47.028455	45.098877

#' EH_HS

2-[illegible] AVGS



o AVG RDG

[illegible]

#F_D 11R x 5C

OVA 37% FORMALDEHYDE DATA

PPM	9513'	'0177'	'6955'	'6969'
0.0	0.00	0.00	0.00	0.00
10.0	1.05	0.80	0.75	1.05
25.0	1.80	1.80	1.05	2.00
50.0	2.40	2.35	1.35	2.20
100.0	4.00	4.20	2.60	4.00
500.0	16.00	15.50	14.00	15.50
0.0	0.00	0.00	0.00	0.00
3.8	4.75	4.80	3.35	4.60
8.4	9.80	9.30	8.80	9.40
93.0	96.00	91.00	120.00	90.00

#F_DS 6R x 6C

PPM	'9513'	'0177'	'6955'	'6969'	
0	0.000	0.000	0.0	0.000	0.000000
10	1.017187	0.817500	0.58125	1.085000	0.876255
25	1.743750	1.839000	0.81375	2.066667	1.615933
50	2.356250	2.401649	1.04625	2.223333	2.041250
100	3.875000	4.290000	2.01500	4.133333	3.578910
500	15.500000	15.840659	10.85000	16.000000	14.551832

THE EQUATION OF THE BEST FIT IS:
0.028102 *X +0.56388

#H1_0 16R x 7C

Sample Readings

ppm	'9509'	'9513'	'0177'	'6955'	'6969'	'7389'
0.0	0.00	0.00	0.0	0.00	0.00	0.00
5.0	3.95	3.40	3.2	2.00	2.60	3.05
10.0	7.70	6.70	6.3	4.05	5.30	6.00
30.0	18.50	18.00	17.5	13.00	16.50	14.00
60.0	39.00	35.50	34.5	27.00	32.50	30.00
90.0	60.50	57.50	58.0	44.00	53.00	47.50
120.0	84.00	79.50	78.0	61.00	73.00	66.00
250.0	135.00	138.00	160.0	140.00	130.00	100.
500.0	290.00	340.00	355.0	300.00	340.00	240.00
750.0	500.00	600.00	620.0	525.00	570.00	400.00
0.0	0.00	0.00	0.0	0.00	0.00	0.00
3.8	4.80	4.50	4.0	2.50	3.05	4.00
8.4	9.00	9.50	9.3	6.40	7.20	9.00
93.0	93.00	94.50	95.0	80.00	83.50	86.50
498.0	380.00	500.00	535.0	500.00	480.00	395.00

#H1_0S1 7R x 8C 19-APR 05 10:52 Page 1

ppm	'9509'	'9513'	'0177'	'6955'	'6969'	'7389'	
0	0.00	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5	3.95	3.348[illegible]	3.132632	2.32[illegible]	2.895808	3.2[illegible]	3.154777
10	7.70	6.593651	6.16[illegible]	4.708125	5.90[illegible]	6.450867	6.253834
30	18.50	17.[illegible]	17.131[illegible]	15.11[illegible]	18.3[illegible]	15.052[illegible]	16.981272
60	39.00	34.98[illegible]	33.7[illegible]	31.38[illegible]	[illegible].197[illegible]	32.254[illegible]	34.591605
90	60.50	56.587302	56.778947	51.150000	59.029940	51.069364	55.852592
120	84.00	78.238095	76.357895	70.912500	81.306389	70.959538	76.[illegible]236

THE [illegible] OF [illegible] IS
0.[illegible] [illegible] 0.[illegible]

#H1_0S2 4R x 8C

ppm	'9509'	'9513'	'0177'	'6955'	'6969'	'7389'	
0	0	0.000000	0.000000	0.0000	0.000000	0.000000	0.000000
250	135	152.539683	156.6315[illegible]	162.7500	167.065868	107.514451	145.916930
500	290	334.603175	347.526316	348.7500	378.682635	268.[illegible]	3[illegible]
750	500	590.476190	606.947368	610.3125	634.880299	430.[illegible]	5[illegible]250

THE [illegible] OF [illegible] IS
0.[illegible]X -21.0[illegible]

#H2 0 15R x 4C

OVA HEXANE DA[illegible]

ppm	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
5.4	4.6	4.6	4.0
10.9	8.8	9.1	[illegible]
32.6	23.0	26.5	25.0
65.2	51.5	56.[illegible]	54.[illegible]
98.0	72.0	83.0	78.0
163.1	125.0	140.[illegible]	145.0
326.1	270.[illegible]	305.[illegible]	320.[illegible]
544.2	520.[illegible]	590.0	620.[illegible]
761.0	935.[illegible]	930.0	99[illegible]
0.0	0.0	0.0	0.0
8.4	9.8	8.9	8.2
93.0	97.0	98.0	100.0
498.0	510.0	505.0	580.0

#H2_0S1 6R x 5C

PP[illegible]	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000	0.000000
5.4	4.410309	4.36[illegible]	3.720	4.18[illegible]
10.9	8.43[illegible]	8.635714	7.254	8.108343
32.6	22.[illegible]	25.147959	23.[illegible]	23.483169
65.2	49.32[illegible]	53.61[illegible]	50.220	51.071212
98.0	69.030928	78.765306	72.54[illegible]	73.415419

THE [illegible] OF [illegible] F[illegible]
0.75[illegible]X 0.09[illegible]

#H2_0S2 5R x 5C

PPm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.00	0.000000
163.1	119.845361	132.857143	134.85	129.184168
326.1	258.865979	289.438776	297.60	281.968252
544.2	498.886701	569.897959	576.60	545.018220
761.0	800.567010	882.551020	920.70	867.939344

THE [illegible] OF [illegible]
1.[illegible] [illegible]

#H2_H 16P x 5C

HNU HEXANE DATA

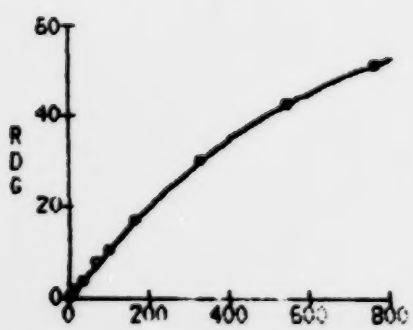
ppm	'82764'	'81470'	'82756' SPAN 2	'82757'
0.0	0.0	0.0	0.0	0.0
5.5	0.6	0.6	2.1	0.7
10.9	1.4	1.3	4.3	1.5
33.0	3.3	3.4	11.9	4.4
65.0	6.9	7.0	25.0	8.7
98.0	9.0	9.4	34.0	11.8
163.0	14.9	15.7	55.0	19.0
327.0	26.0	28.0	94.0	34.0
545.0	38.0	40.0	132.0	47.0
762.0	45.0	47.0	162.0	59.0
0.0	0.0	0.0	0.0	0.0
10.0	11.4	11.4	37.0	11.5
10.0	11.2	11.1	37.0	11.5
101.0	95.0	98.0	340.0	36.0
101.0	96.0	94.0	340.0	95.0

#H2_HS 10R x 6C

ppm	'82764'	'81470'	'82756' SPAN 2	'82757'	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
5.5	0.634555	0.631250	0.623824	0.740314	0.657486
10.9	1.480628	1.367708	1.277353	1.586387	1.428019
33.0	3.490052	3.577083	3.535000	4.653403	3.813885
65.0	7.297382	7.364583	7.426471	9.201047	7.822371
98.0	9.518325	9.889583	10.100000	12.479581	10.496872
163.0	15.768115	16.517708	16.338235	20.094241	17.177075
327.0	27.497382	29.458333	27.926529	35.958115	30.218540
545.0	40.188482	42.083333	39.211765	49.738220	42.797596
762.0	47.591623	49.447917	48.123529	62.513600	51.890244

HZ_HS

HEXANE



o AVG RDG
0.0761+72.61[illegible]*.1-EXP((-X)/611.000483...

#HS_H 11R x 5C

Sample Readings

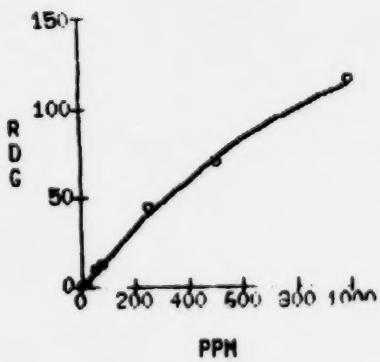
ppm	'81428'	'81469'	'81470'	'82764'
0	0.0	0.0	0.0	0.0
10	2.0	1.8	1.8	1.4
50	9.4	9.0	8.7	6.2
75	14.6	13.1	12.6	8.7
250	49.0	48.0	44.0	31.0
500	78.0	75.0	70.0	51.0
1000	120.0	129.0	120.0	86.0
0	0.0	0.0	0.0	0.0
10	10.3	12.5	12.7	10.8
101	92.0	105.0	110.0	92.0

#HS_H 11R x 5C

PPm	'81428'	'81469'	'81470'	'82764'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
10	2.195652	1.731429	1.652727	1.538695	1.779131
50	10.319565	8.657143	7.988182	6.806522	8.442853
75	16.026461	12.685455	11.360000	9.561739	12.437449
250	53.793478	46.171429	40.400000	34.032609	43.599379
500	85.630435	72.142857	64.227273	55.989130	69.508787
1000	131.739130	124.085714	110.181818	94.413043	115.104927

#HS_HS

HYDROGEN SULFIDE



o AVG RDG

——— -0.047978+177.56526*(1-EXP((-X)/963.722201))

#I_0 14R x 4C

OVA ISOPROPANOL DATA

ppm	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
10.9	6.7	7.5	6.1
27.3	16.0	18.0	17.0
54.5	30.0	35.0	33.0
109.0	62.0	71.5	66.5
218.1	125.0	150.0	145.0
436.2	255.0	310.0	310.0
763.3	470.0	570.0	570.0
1090.4	720.0	885.0	870.0
0.0	0.0	0.0	0.0
8.4	9.5	9.3	8.1
93.0	97.0	99.5	96.0
498.0	505.0	545.0	590.0

#I_0S1 5R x 5C

ppm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
10.9	6.423711	7.010050	5.909375	6.447712
27.3	15.340206	16.824121	16.468750	16.211026
54.5	28.76288[illegible]	32.713568	31.968750	31.148401
109.0	59.443299	66.829146	64.421875	63.564773

The [illegible]
0.5[illegible]

#I_0S2 5R x 5C

ppm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
218.1	119.845361	140.201005	140.46875	133.505039
436.2	244.[illegible]	289.748744	300.[illegible]	278.181927
763.3	450.518557	532.763819	552.18750	511.856625
1090.4	690.309278	827.185930	842.81250	786.769236

THE [illegible] OF THE [illegible]
0.7201[illegible] -19.[illegible]

#I_H 15R x 5C

HNU ISOPROPANOL DATA

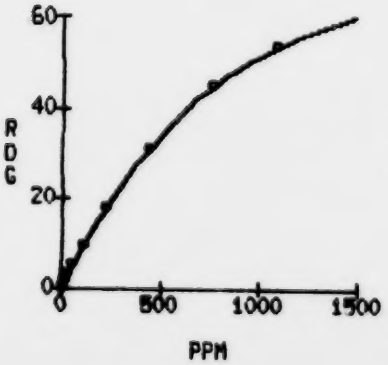
PPM	'82764'	'81470'	'82756' span 2	'82757'
0.0	0.0	0.0	0.0	0.0
10.9	1.1	0.9	3.4	1.9
27.0	2.7	2.2	8.1	4.1
55.0	4.6	4.0	15.3	6.9
109.0	8.3	7.7	29.0	11.4
218.0	14.8	15.1	57.0	21.0
436.0	27.0	28.0	100.0	35.0
762.0	37.0	40.0	143.0	49.0
1089.0	44.0	49.0	172.0	59.0
0.0	0.0	0.0	0.0	0.0
10.0	11.2	10.9	37.0	
10.0	10.6	10.6	37.0	11.2
101.0	96.0	94.0	340.0	95.0
101.0	88.0	96.0	340.0	93.0

#I_HS 9R x 6C

PPM	'82764'	'81470'	'82756' span 2	'82757'	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
10.9	1.207609	0.956847	1.010000	2.041139	1.303985
27.0	2.964130	2.338947	2.406176	4.405319	3.028643
55.0	5.050000	4.262632	4.545000	7.413830	5.315365
109.0	9.111957	8.186316	8.614[illegible]	12.248936	9.54[illegible]
218.0	16.247826	16.053684	16.932353	22.563830	17.949426
436.0	29.641304	29.768421	29.705882	37.606383	31.680498
762.0	40.619565	42.526316	42.479412	52.648936	44.568557
1089.0	48.304348	52.094737	51.094118	63.393617	53.721705

I_HS

ISOPROPANOL



o AVG RDG

—— 0.213533+68.571102*(1-EXP((-X)/722.369336))

#MOL 0 13R x 4C

OVA METHANOL DATA

ppm	'3507'	'3509'	'3513'
0.0	0.00	0.00	0.00
32.6	3.30	4.85	3.55
76.3	7.55	9.50	7.90
217.6	20.00	27.50	24.00
544.1	50.00	68.00	60.00
870.6	86.00	113.00	100.00
870.6	83.00	108.00	97.50
0.0	0.00	0.00	0.00
3.8	4.30	4.30	4.65
8.4	9.75	10.10	9.35
93.0	96.00	94.00	105.00
498.0	500.00	510.00	600.00

#MOL_091 7P x 5C

PI	'9507'	'9509'	'9[illegible]'	
0.0	0.000000	0.000000	0.000000	0.000000
32.6	3.196875	4.798404	3.144286	3.713188
76.3	7.314062	9.398936	6.997143	7.903381
217.6	19.375000	27.207447	21.257143	22.613137
544.1	48.437500	67.276596	53.142857	56.285651
870.6	83.312500	111.797872	88.571429	94.760914
8[illegible]	[illegible].406250	105.851064	82.357143	91.204819

TH[illegible] [illegible]

0.1[illegible] 0.[illegible]

WMC1_0 16R x 7C

Sample Readings

ppm	'3509'	'9513'	'0177'	'6955'	'6969'	'7389'
0.0	0.0	0.00	0.00	0.00	0.00	0.0
4.0	4.3	3.95	4.00	3.[illegible]	3.05	4.3
8.0	7.8	7.20	7.25	5.40	5.70	7.8
25.0	19.5	19.50	20.00	17.00	20.00	18.0
50.0	40.0	39.50	40.00	35.00	40.50	36.0
75.0	63.5	62.50	63.50	56.50	64.50	57.5
100.0	84.0	83.00	83.00	75.50	83.50	74.5
300.0	180.0	210.00	205.00	225.00	210.00	160.0
600.0	345.0	425.00	405.00	445.00	430.00	305.0
900.0	505.0	605.00	590.00	640.00	620.00	445.0
0.0	0.0	0.00	0.00	0.00	0.00	0.0
3.8	4.8	4.75	4.65	3.35	3.50	5.3
8.4	8.5	9.00	9.50	8.55	7.85	9.5
93.0	92.0	99.00	98.00	96.50	96.50	96.0
498.0	385.0	515.00	485.00	580.00	495.00	405.0

WMC1_0S1 7R x 8C

ppm	'9509'	'9513'	'0177'	'6955'	'6969'	'7389'	[illegible]
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
4	4.346739	3.710606	3.795918	2.891192	2.939378	4.165625	3.641576
8	7.884783	6.753636	6.880102	5.204145	5.493264	7.556250	6.630363
25	19.711957	18.318182	18.979592	16.383420	19.274611	17.437500	18.350877
50	40.434783	37.106061	37.959184	33.730570	39.031088	34.875000	37.189447
75	64.190217	58.712121	60.260204	54.450777	62.160622	55.703125	59.[illegible]
100	84.913043	77.969697	78.765306	72.761658	80.471503	72.1[illegible]	77.9[illegible]

THE [illegible] OF [illegible]
0.[illegible] 0.12H6[illegible]

W[illegible] x 8C

Pp[illegible]	'[illegible]'	'9513'	'01[illegible]'	'6956'	'6969'	'738[illegible]'	[illegible]
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.0[illegible]	0.[illegible]
300	181.956522	197.272727	194.540816	216.839378	202.383420	15[illegible]	191.35[illegible]
600	348.750000	399.242424	384.336735	428.860104	414.404145	298.468[illegible]	378.510360
900	510.[illegible]	560.333333	559.[illegible]	616.[illegible]	59[illegible]	431.[illegible]	54[illegible]

THE [illegible]
[illegible] 4.[illegible]

MMC2_0 16R x 4C

OVA METHYLENE CHLORIDE DATA

PPM	'9507'	'9509'	'9513'
0.0	0.00	0.00	0.00
5.5	5.65	5.55	5.20
8.7	9.10	9.25	8.45
27.3	25.00	25.00	27.00
54.7	50.00	50.00	53.00
81.9	73.00	71.00	76.50
109.4	97.00	94.00	102.00
273.4	220.00	235.00	265.00
547.2	415.00	445.00	500.00
818.6	620.00	665.00	735.00
0.0	0.00	0.00	0.00
3.8	4.50	4.10	4.00
8.4	10.00	9.20	8.90
93.0	97.50	86.00	100.00
498.0	510.00	460.00	580.00

MMC2_0S1 7R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.0000	0.000000
5.5	5.389231	6.109884	4.8360	5.445038
8.7	8.680000	10.002907	7.8585	8.847136
27.3	23.846154	27.034884	25.1100	25.330346
54.7	47.692308	54.069767	49.2900	50.350692
81.9	69.630769	76.779070	71.1450	72.518280
109.4	92.823077	101.651163	94.8600	96.344747

THE EQUATION OF THE BEST FIT IS:
0.8[illegible]34*X +0.928444

MMC2_0S2 4R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.00	0.000000
273.4	209.846154	254.127907	246.45	236.808020
547.2	395.846154	481.220930	465.00	447.355695
818.6	591.384615	713.127907	683.55	664.697807

THE EQUATION OF THE BEST FIT IS:
0.80767[illegible]*X +6.226124

@MC2_H 10R x 5C

HNU METHYLENE CHLORIDE DATA

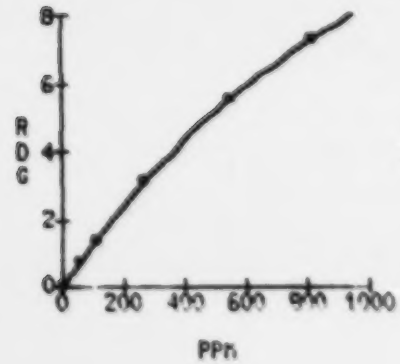
PPM	'82764'	'81470'	'82756'	'82757'
0	0.0	0.0	0.0	0.0
55	0.8	0.7	0.7	0.8
109	1.4	1.2	1.3	1.4
263	3.0	2.8	2.8	3.1
545	6.3	6.0	4.9	5.6
817	7.4	8.4	6.7	
0	0.0	0.0	0.0	0.0
10	11.1	10.9	10.6	11.1
101	96.0	96.0	94.0	93.0

@MC2_HS 6R x 6C

PPM	'82764'	'81470'	'82756'	'82757'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
55	0.841667	0.736458	0.752128	0.868817	0.799767
109	1.472917	1.262500	1.396809	1.520430	1.413164
263	3.156250	2.945833	3.008511	3.366667	3.119315
545	5.576042	5.260417	5.264894	5.973118	5.518618
817	7.575000	7.253375	7.198936		7.344437

@ MC2_HS

METHYLENE CHLORIDE



● AVG RDG
—— 0.041881+12.571853*(1-EXP((-X)/943.320495))

#MEK1 0 16B x 2C

PPm	'9509	9513'	'0177'	'6955'	'6969'	
0.0	0.0	0.00	0.0	0.0	0.00	
5.0	3.0	3.20	2.85	2.40	2.60	3.2
10.0	7.45	6.50	6.00	4.90	5.40	6.1
30.0	17.50	17.00	15.50	14.5	18.00	14.1
60.0	38.00	34.50	33.50	3[illegible]	38.50	29.5
90.0	60.50	55.00	53.50	50.00	59.00	41.0
120.0	80.00	72.50	70.00	66.00	76.50	60.0
250.0	130.00	140.00	120.00	145.00	145.00	100.0
500.0	250.00	300.00	280.00	315.00	300.00	200.0
1000.0	565.00	680.00	630.00	685.00	680.00	480.0
0.0	0.00	0.00	0.00	0.00	0.00	0.0
3.8	4.65	4.75	4.50	3.25	3.45	5.2
8.4	9.00	9.50	9.50	8.30	8.00	10.0
93.0	93.50	99.50	98.00	96.50	97.00	95.5
498.0	385.00	515.00	480.0	5[illegible]	49[illegible]	40[illegible]

#ME[illegible] [illegible]

PP[illegible]	[illegible]09'	'9513'	'0177'	'6955'	'6969'	'7383'	
0	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
5	3.680214	2.990956	2.704592	2.312953	2.492784	3.116230	2.882955
10	7.410160	6.[illegible]	5.693878	4.[illegible]	5.177320	6.[illegible]	5.[illegible]
30	17.406417	15.[illegible]	14.709184	13.[illegible]	[illegible].267732	13.633508	15.478397
60	32.796791	32.246231	31.790816	30.839378	36.912371	28.727749	33.052223
90	60.176471	51.[illegible]	50.770408	48.[illegible]	[illegible]5.567010	42.848168	51.659270
120	79.572193	67.[illegible]	66.428571	63.606218	73.345361	58.429319	68.190913

THE [illegible] [illegible]
0.5[illegible] [illegible] 0.[illegible]

#MEK1_0S2 4R x 8C

PPm	'9509'	'9513'	'0177'	'6955'	'6969'	'7[illegible]	
0	0.000000	0.000000	0.000[illegible]	0.0[illegible]	0.000000	0.[illegible]	
250	129.304813	130.854271	113.87[illegible]	139.740933	139.[illegible]	92.[illegible]	
500	248.663102	280.402010	265.714286	303.5/5130	287.628866	194.[illegible]4398	263.45/365
1000	561.[illegible]	[illegible]30.[illegible]005	597.[illegible]	660.[illegible]	651.[illegible]	467.[illegible]	595.[illegible]

TH[illegible] [illegible]
0.[illegible] [illegible]

BMEK1 H 1RR x 3C

ppm	'81470'	'82764'		ppm	81470'	'8.764'
0	0.0	0.0	15	508	380.	380.0
5	3.6	3.2				
10	6.8	5.8				
30	19.2	16.0				
60	38.0	32.5				
90	55.0	48.0				
120	70.0	59.0				
250	132.0	114.0				
500	220.0	200.0				
1000	310.0	305.0				
0	0.0	0.0				
10	12.6	11.2				
101	106.0	98.0				

BMEK1_HS 10R x 4C

ppm	'81470'	'82764'	
0	0.000000	0.000000	0.000000
5	3.430189	3.297959	3.364074
10	6.479245	5.977551	6.228398
30	18.294340	16.489796	17.392068
60	36.207547	33.494898	34.851223
90	52.405660	49.469388	50.937524
120	66.698113	60.806122	63.752118
250	125.[illegible]	117.499796	121.631530
500	203.602642	208.[illegible]419	207.8[illegible]945
1000	[illegible]	314.36[illegible]	304.95[illegible]

RE[illegible]
0.39[illegible] 3.[illegible] EXP[illegible]

MMEK2 D 12R x 4C

OVA METHYL ETHYL KETONE DATA

PPM	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
5.0	4.7	6.7	4.9
25.0	15.0	22.0	16.0
50.1	29.0	44.0	33.0
100.1	57.0	84.0	63.0
250.3	140.0	220.0	170.0
500.5	330.0	520.0	400.0
1001.1	670.0	1020.0	820.0
0.0	0.0	0.0	0.0
8.4	9.0	11.0	8.5
93.0	89.0	115.0	96.0
498.0	495.0	640.0	580.0

[illegible]

PP	[illegible]	[illegible]	[illegible]	[illegible]
0.0	0.000000	0.000000	0.000000	0.000000
5.0	4.911236	5.418261	4.[illegible]	5.025645
25.0	15.674157	[illegible]91304	15.500000	16.321821
50.1	30.303371	35.682603	31.[illegible]	32.[illegible]
100.1	59.561798	67.930435	61.031250	62.841161

THE [illegible] OF THE [illegible] FIT IS
0.6[illegible]X [illegible]

MMEX2_DS2 4R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.0000	0.000000
250.3	146.292135	177.913043	164.[illegible]	162.964236
500.5	344.831461	420.521739	387.5000	384.284400
1001.1	700.112360	824.869565	794.3750	773.118975

THE [illegible] OF THE [illegible] FIT IS
0.[illegible] 1.[illegible]

#MEK2_H 13R x 5C

HNU METHYL ETHYL KETONE DATA

ppm	'82764' span 5.7	'81470'	'82756'	'82757'
0	0.0	0.0	0.0	0.0
5	7.9	5.1	5.2	5.4
25	26.0	17.3	17.4	17.1
50	48.0	33.0	33.0	32.0
100	88.0	60.0	61.0	58.0
250	190.0	117.0	131.0	121.0
500	350.0	210.0	240.0	220.0
1000	480.0	280.0	335.0	320.0
0	0.0	0.0	0.0	0.0
10	17.2	9.8	9.8	9.8
101	148.0	89.0	101.0	97.0
508	560.0	320.0	[illegible]	360.0

#MEK2_HS 8R x 6C

PPM	'82764' span 5.7	'81470'	'82756'	'82757'	
0	0.000000	0.000000	0.0	0.000000	0.000000
5	5.391216	5.787640	5.2	5.622680	5.500394
25	17.743243	19.632584	17.4	17.808150	18.149246
50	32.756757	37.449438	33.0	33.319588	34.131446
100	60.054054	68.089888	61.0	60.391753	62.383924
250	129.662162	132.775281	131.0	125.989691	129.856783
500	238.851351	238.314607	240.0	229.072165	236.569531
1000	327.567568	317.752809	335.0	333.195876	328.379063

RL[illegible]

0.8[illegible]

#MIK_[illegible] 4R x 4C

OVA METHYL ISOBUTYL KETONE DATA

ppm	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
27.2	16.0	24.5	18.5
54.4	31.0	49.0	37.0
108.8	66.0	100.0	78.0
272.1	175.0	280.0	225.0
544.2	360.0	575.0	480.0
0.0	0.0	0.0	0.0
8.4	8.8	10.0	8.7
93.0	88.0	110.0	97.0
496.0	480.0	605.0	590.0

#MIK_OS1 4R x 5C

ppm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
27.2	16.909091	20.713636	17.737113	18.453608
54.4	32.761364	41.427273	35.474227	36.954288
108.8	69.750000	84.545455	74.783505	76.359653

THE [illegible] OF [illegible]
0.[illegible] 0.[illegible]

#MIK_OS2 3R x 5C

ppm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
272.1	184.943182	236.727273	215.721649	212.464035
544.2	380.454545	486.136364	460.206186	442.265698

THE [illegible] OF [illegible] FI[illegible]
0.[illegible]

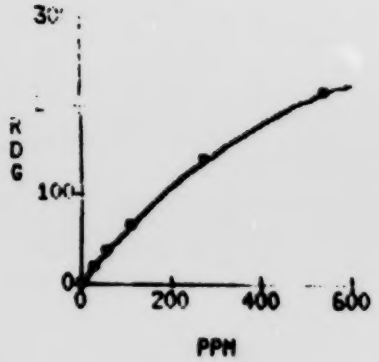
HNU METHYL ISOBUTYL KETONE DATA

PPM	82/64 spec E c	814/0	82/56	82/5
0	0	0.0	0.0	0.0
27	24	15.2	16.2	17.4
55	49	34.0	32.0	37.0
109	91	59.0	61.0	63.0
272	194	132.0	128.0	134.0
545	300	200.0	200.0	210.0
0	0	0.0	0.0	0.0
10		9.6	9.8	9.8
101	142	93.0	93.0	96.0
508	340	340.0	360.0	400.0

PI	82/64 spec E.c	814/0	82/56	82/5
0	0.00	0.00	0.00	0.00
27	18.49	16.15	17.64	17.64
55	34.964113	36.924731	34.021053	38.927083	36.191
109	64.7	64.076059	64.8	66.291250	64.9
272	137.963343	143.354911	136.094211	140.9791	130.3
545	213.380282	217.204301	212.631579	220.93/500	216.078415

MIK_HS

METHYL ISOBUTYL KETONE



o AVG HNU
0.048059+309.872209*(1-EXP(-X)/456.083839))

[illegible] 4C

OVA METHYL METHACRYLATE DATA

PPM	'9507'	'9509'	'9513'
0.0	0.00	0.00	0.0
5.4	3.50	4.10	3.9
16.3	8.90	10.20	9.6
27.2	13.50	17.00	16.0
54.4	26.00	33.00	31.0
108.8	53.00	66.50	63.0
163.2	83.00	100.00	98.0
272.0	130.00	165.00	170.0
544.1	285.00	360.00	400.0
1088.2	625.00	755.00	870.0
0.0	0.00	0.00	0.0
8.4	9.75	9.95	10.0
93.0	90.50	94.00	100.7
498.0	485.00	495.00	625.0

[illegible]_OS1 7R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000	0.000000
5.4	3.596686	4.056383	3.627	3.760023
16.3	9.145856	10.091436	8.928	9.388411
27.2	13.972928	15.819149	14.000	15.190692
54.4	26.718232	32.648936	28.830	29.399056
108.8	54.464088	65.792553	58.590	59.615547
163.2	85.292818	98.936170	91.140	91.789663

THE [illegible]
0.5[illegible] 0.[illegible]

[illegible]_OS2 4R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.0	0.000000
272.0	133.591160	163.244681	158.1	151.645280
544.1	292.872928	356.170213	372.0	340.347114
1088.2	642.765193	746.980000	809.1	732.777759

THE [illegible] OF [illegible]
0.6805[illegible] 17.[illegible]

#MM_H 19R x 5C

HNU METHYL METHACRYLATE DATA

ppm	'82764'	'81470'	'82756'	'8275/'
0.0	0.0	0.0	0.0	0.0
5.5	2.6	3.0	2.4	3.5
16.4	6.8	7.5	6.3	8.6
27.0	11.1	12.2	10.4	13.9
55.0	22.0	24.0	21.0	27.0
109.0	41.0	45.0	39.0	49.0
163.0	60.0	66.0	58.0	70.0
272.0	86.0	96.0	84.0	100.0
545.0	145.0	161.0	143.0	169.0
1089.0	215.0	230.0	210.0	250.0
1634.0	250.0	255.0	240.0	250.0
0.0	0.0	0.0	0.0	0.0
10.0	11.2	11.2	10.4	12.8
10.0	11.1	12.3	10.4	13.2
101.0	96.0	108.0	92.0	107.0
101.0	96.0	107.0	92.0	[illegible]
508.0	3[illegible]	38[illegible]	360.0	3[illegible]

#M[illegible] 3C

ppm	'82764	'81470'	82[illegible]56	'8275/'	
0.0	0.000000	0.000000	0.0	0.000	0.000000
5.5	2.735417	2.819809	2.634783	3.303758	2.873136
16.4	7.154167	7.04651[illegible]	6.[illegible]	8.112[illegible]	[illegible]
27.0	11.678125	11.45[illegible]	11.417391	13.12[illegible]	[illegible]
55.0	23.145833	22.548[illegible]	23.054349	26.49[illegible]	23.558750
109.0	43.[illegible]	42.279070	42.815[illegible]	46.252336	43.620510
163.0	63.125000	62.[illegible]	63.6[illegible]	66.[illegible]	63.[illegible]
272.0	90.479167	90.196349	92.217391	94.392523	91.821108
545.0	152.552083	151.265116	156.989130	159.523364	155.082424
1089.0	226.197917	216.093023	230.543478	235.981308	227.203932
1634.0	263.020833	239.581395	263.478261	235.981308	250.515449

RE[illegible] FIT 15
0.6[illegible] [illegible]3.[illegible] [illegible]

BMMA_D 1SR x 5C

ppm	'9513'	'0177'	'6955'	'6969'
0.0	0.0	0.00	0.00	0.00
10.0	1.6	1.15	2.00	1.80
25.0	6.7	5.75	6.00	5.45
40.0	11.0	8.00	10.00	8.05
100.0	32.5	24.50	32.50	26.00
150.0	52.0	40.00	47.00	37.00
200.0	70.0	55.00	67.00	54.50
250.0	90.0	70.00	80.50	64.00
600.0	215.0	140.00	220.00	155.00
0.0	0.0	0.00	0.00	0.00
3.8	4.5	5.65	3.25	4.40
8.4	9.9	10.00	8.00	9.20
93.0	95.0	96.50	98.50	93.00
498.0	530.0	460.00	600.00	480.00

BMMA_DS1 3R x 6C

PPm	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.00	0.000000
10	1.566316	1.108290	1.888325	1.80	1.590733
25	6.558947	5.541451	5.664975	5.45	5.803843
40	10.758421	7.709845	9.441624	8.05	8.992472
100	31.815789	23.611399	30.685[illegible]	26.00	28.028117
150	50.[illegible]	38.549223	44.375[illegible]	37.00	42.707530
200	68.526316	53.006181	63.258805	54.50	59.822696
250	88.105263	67.461140	76.005076	64.00	73.892870

THE FRACTION OF [illegible]
0.3016[illegible] 1.61[illegible]

BMMA_DS2 2R x 6C

PP[illegible]	'[illegible]513'	'0177'	'6955'	'6969'	
0	0.000000	0.00000	0.000000	0	0.000000
600	210.473684	134.92228	207.715736	155	177.027925

THE [illegible] OF THE [illegible]
0.29[illegible] 0

#MMA_H 13R x 5C

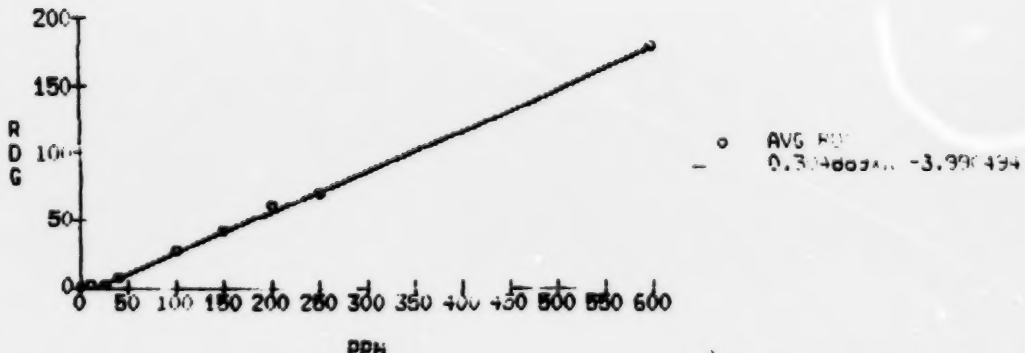
ppm	'81428'	'81469'	'81470'	'82764'
0	0.0	0.0	0.0	0.0
10	1.8	0.1	0.2	0.2
25	5.2	0.1	1.0	0.3
40	8.6	2.6	6.2	7.0
100	34.0	22.0	22.0	27.0
150	44.0	38.0	38.0	40.0
200	64.0	55.0	57.0	64.0
250	78.0	72.0	64.0	68.0
600	186.0	178.0	178.0	185.0
0	0.0	0.0	0.0	0.0
10	10.6	11.3	12.4	11.8
101	98.0	103.0	108.0	100.0

#MMA_HS 9R x 6C

ppm	'81428'	'81469'	'81470'	'82764'	
0	0.000000	0.000000	0.000000	0.000	0.000000
10	1.855102	0.098058	0.187037	0.202	0.585549
25	5.359184	0.098058	0.935185	0.303	1.673857
40	8.863265	2.549615	5.798148	7.070	6.070232
100	35.040816	21.572816	20.574074	27.270	26.114426
150	45.346939	37.262136	35.537037	40.400	39.636528
200	65.969184	53.932039	53.305556	64.640	69.469196
250	80.387755	70.601942	59.851852	68.68.	69.880387
600	191.693878	174.543689	166.462963	186.850	179.887632

MMA_HS

MONOMETHYL AMINE



$M_D 14R x 4C

OVA MORPHOLINE DATA

ppm	'9507'	'9509'	'9513'
0.0	0.00	0.00	0.0
5.4	2.96	2.55	2.3
16.3	9.05	8.20	6.8
27.3	12.50	12.00	12.0
54.4	26.00	25.00	26.5
108.8	50.00	48.00	50.5
163.2	78.00	75.00	77.0
544.0	260.00	310.00	300.0
1088.0	650.00	785.00	745.0
0.0	0.00	0.00	0.0
8.4	10.00	9.70	8.7
93.0	95.00	93.00	97.0
498.0	490.00	560.00	570.0

$M_DS1 [illegible] x 5C

ppm	'9507'	'9509'	'9513'	
0.0	[illegible]	0.00	[illegible]	[illegible]
5.4	2.882895	2.55	[illegible]05155	2.54[illegible]
16.3	8.85[illegible]	8.20	6.513[illegible]	[illegible].859687
27.3	12.236842	12.00	[illegible].205155	11.91[illegible]
54.4	25.45[illegible]	25.00	25.407216	25.286616
108.8	48.947368	48.00	48.417526	48.45[illegible]
163.2	[illegible]	75.00	[illegible]	[illegible]

THE [illegible]
0.45[illegible]

$M_DS2 [illegible] x 5C

PP[illegible]	[illegible]	[illegible]9509'	'95[illegible]
0	0.000000	v	0.000000	0.000000
544	284.526316	310	787.[illegible]9806	284.[illegible]1727
1088	636.315789	785	714.278351	711.864716

THE [illegible]
0.6542[illegible]X [illegible]

##M_H 16R x 5C

HNU MORPHOLINE DATA

ppm	'82764'	'81470'	'82756'	'82757'
0.0	0.0	0.0	0.0	0.0
5.5	7.5	3.5	3.5	
16.4	11.3	11.4	11.5	10.9
27.0	15.7	16.3	16.6	16.5
55.0	31.0	34.0	36.0	38.0
109.0	56.0	61.0	61.0	62.0
163.0	84.0	91.0	92.0	91.0
545.0	230.0	220.0	250.0	280.0
1089.0	340.0	310.0	390.0	350.0
0.0	0.0	0.0	0.0	0.0
10.0	11.0	11.0	10.5	11.5
101.0	95.0	96.0	95.0	97.0
101.0	88.0	84.0	92.0	93.0
101.0	91.0	86.0	93.0	95.0
508.0	340.0	300.0	360.0	360.0

##M_HS 9R x 6C

ppm	'82764'	'81470'	'82[illegible]'	'82757'	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
5.5	3.871851	3.985344	3.897105		3.918100
16.4	12.500548	12.980834	12.449089	11.588421	12.379723
27.0	17.368018	18.560316	17.969989	17.542105	17.960107
55.0	34.293538	38.714769	38.971061	37.210526	37.297474
109.0	61.949617	69.456880	66.034298	65.915789	65.839639
163.0	92.924425	103.618940	99.592712	96.747368	98.220861
545.0	254.435926	250.507328	270.632369	265.789474	260.341274
1089.0	[illegible].122673	352.987530	422.186495	382.[illegible]	383.508402

RL [illegible]

0.3[illegible] [illegible] [illegible]

BP_C :3# v 5C

PPm	'9513'	va.7'	'6955'	'6969'
0.0	0.0	0.00	0.00	0.00
10.0	3.3	3.40	2.85	3.40
25.0	8.8	8.40	7.35	8.30
60.0	19.0	19.00	17.00	19.50
90.0	30.0	30.00	27.50	30.50
175.0	56.5	58.00	52.50	57.00
250.0	94.0	94.00	87.50	94.00
500.0	190.0	170.00	200.00	165.00
1000.0	460.0	410.00	490.00	405.00
0.0	0.0	0.00	0.00	0.00
3.8	4.3	4.35	3.50	4.35
8.4	9.6	9.25	8.45	9.30
93.0	91.0	90.50	91.00	91.00
498.0	515.0	470.00	590.00	470.00

BP_0S1 7P v 6C

PPm	'9513'	'01[illegible]	'69[illegible]	'6960'	
0	0.000000	0.0000	0.000000	0.000000	0.000000
10	3.372850	3.4939.[illegible]	2.9[illegible]32	3.474725	3.[illegible]
25	8.91[illegible]	3.632044	7.5[illegible]	3.48[illegible]18	8.4[illegible]
60	19.417[illegible]	19.524862	17.3[illegible]	19.928571	19.0[illegible]
90	30.699341	30.828729	28.1[illegible]	31.170330	30.13[illegible]
175	57.[illegible]	59.602210	53.[illegible]	58.252747	57.51[illegible]
250	96.068974	96.595608	89.[illegible]	96.068[illegible]	[illegible]

THE [illegible]
0.36[illegible]91#X 1.9[illegible]

BP_0S2 4P v 6C

PPm	'9513'	'0172'	'69[illegible]	'6[illegible]	
0	0.00[illegible]	0.000000	0.000000	0.000000	0.000000
500	194.175874	174.696133	204.395604	168.62[illegible]	[illegible]
1000	470.109890	421.328967	500.769231	413.901099	451.526547

THE [illegible] OF [illegible]
0.45152[illegible] 18.42993

BP_H 149 x 5C

PPM	'81428'	'81469'	'81[illegible]'	'82764'
0	0.0	0.0	0.0	0.0
10	4.4	4.4	4.5	4.0
25	9.8	9.9	10.8	8.8
60	24.0	26.0	28.0	23.0
90	32.0	38.0	39.0	32.0
175	62.0	68.0	70.0	60.0
250	90.0	98.0	100.0	84.0
500	150.0	159.0	164.0	140.0
1000	260.0	260.0	280.0	240.0
0	0.0	0.0	0.0	0.0
10	10.9	12.0	12.8	11.4
101	100.0	106.0	106.0	98.0
508	340.0	340.0	390.0	380.0

BP_[illegible] [illegible] x 5C

PPM	'81428'	'81[illegible]'	'81479'	'82764'	
0	0.000	0.000000	0.000000	0.000000	0.000000
10	4.444	4.232381	4.287756	4.122449	4.271641
25	9.898	9.522857	10.290866	9.059388	9.695203
60	24.240	25.009524	25.679245	23.704082	24.908213
90	32.320	36.552381	37.160377	32.979592	34.753088
175	62.620	65.409524	66.698113	61.836735	64.141093
250	90.900	94.266667	95.283019	86.571429	91.755279
500	151.500	152.942857	156.264151	144.285714	151.248181
1000	262.600	250.095238	266.792453	247.346939	256.708657

[illegible]
1.2[illegible]3.[illegible] Exp[illegible].08'[illegible]

#PG_0 9R x 5C

ppm	'9513'	'0177'	'6955'	'6969'
0.0	0.00	0.00	0.00	0.00
10.0	2.60	1.70	1.75	2.20
30.0	5.75	5.10	5.20	5.35
60.0	10.00	10.00	10.00	10.00
90.0	14.50	15.00	17.50	15.50
0.0	0.00	0.00	0.00	0.00
3.8	4.65	4.35	3.05	3.40
8.4	9.50	9.75	8.45	7.60

#PG_051 5R x 6C

ppm	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
10	2.298947	1.464615	1.739645	2.431579	1.983697
30	5.084211	4.393846	5.169231	5.913158	5.140111
60	8.842105	8.615385	9.940828	11.052632	9.612737
90	12.821053	12.923077	17.396450	17.131579	15.068040

THE [illegible] OF THE [illegible]
0.16[illegible] 0.1314[illegible]

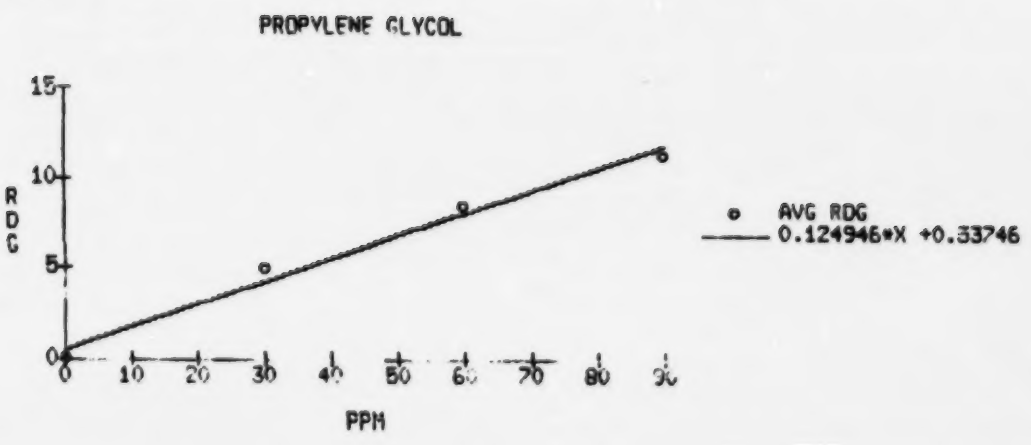
#PG_H 7R x 5C

ppm	'81428'	'81469'	'81470'	'82764'
0	0.0	0.00	0.0	0.00
30	5.6	4.60	5.2	4.65
60	9.4	8.20	8.4	7.80
90	12.6	11.25	11.6	10.65
0	0.0	0.00	0.0	0.00
10	11.9	11.80	12.0	11.30

#PG_R 4R x 6C

ppm	'81428'	'81469'	'81470'	'82764'	
0	0.000000	0.000000	0.0	0.000000	0.000000
30	5.317647	4.493051	5.2	4.773451	4.943537
60	8.926050	7.991525	8.4	8.[illegible]	8.331164
90	11.964706	10.963983	11.6	10.932743	11.365358

PG_HS



&PO_0 16R x 4C

OVA PROPYLENE OXIDE DATA

ppm	'9507'	'9509'	'9513'
0.0	0.00	0.00	0.00
5.4	3.35	4.20	3.40
10.9	6.40	7.95	6.45
32.6	18.00	23.00	20.50
65.3	36.00	46.00	40.00
98.2	54.50	68.00	60.00
130.4	73.00	91.50	80.00
271.8	150.00	175.00	175.00
543.6	300.00	360.00	380.00
1087.0	630.00	740.00	780.00
0.0	0.00	0.00	0.00
3.8	4.40	4.75	4.25
8.4	9.85	10.00	9.30
93.0	96.50	103.00	101.00
498.0	500.00	510.00	600.00

&PO_[illegible]

Ppm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
5.4	3.228492	3.792233	3.130693	3.383808
10.9	6.167876	7.178155	5.939109	6.428700
32.6	17.347150	20.766990	18.876238	18.996793
65.3	34.694301	41.533981	36.831683	37.686056
98.2	52.523318	61.398058	55.247525	56.389633
130.4	70.352332	82.616505	73.663366	75.544058

THE [illegible] OF [illegible]
0.[illegible] 0.[illegible]

&PO_0S2 4R x 5C

ppm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
271.8	144.559685	158.009709	161.138614	154.559303
543.6	289.119171	325.048544	349.900990	321.356235
1087.0	607.150259	668.155340	718.217822	664.560604

THE [illegible] OF [illegible]
0.[illegible] 0.[illegible]

#PO_H 6R x 5C

HNU PROPYLENE OXIDE [illegible]

PPm	'82764'	'81470'	'82[illegible]'	'82757'
0	0	0	0	0
545	30	35	31	35
1089	47	54	48	55
0	0	0	0	0
101	95	99	96	93

#PO_HS 3R x 6C

PPm	'82764'	'81470'	'82[illegible]'	'82757'	
0	0.000000	0.00	0.000000	0.00	0.000000
545	31.894737	35.[illegible]	32.614583	48.010[illegible]	44.556786
1089	49.968421	55.090909	50.500000	69.731183	53.827[illegible]

RESULT OF FIT IS

-1.096[illegible] + 20[illegible] * [illegible] * (1-EXP[illegible]

#S.0 149 x 4C

OVA STYRENE DATA

PPm	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
5.4	5.4	6.3	5.3
10.9	10.0	12.0	11.0
27.2	24.0	29.0	28.0
54.5	50.0	59.0	58.0
108.9	100.0	120.0	125.0
163.4	150.0	185.0	200.0
272.4	260.0	325.0	350.0
544.?	680.0	835.0	890.0
0.0	0.0	0.0	0.0
8.4	9.?	9.6	8.6
93.0	95.5	97.0	100.0
498.0	495.0	530.0	610.0

#S_OS1 5R x 5C

PPm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000	0.000000
5.4	5.258639	5.040206	4.929	5.409282
10.9	9.738220	11.505155	10.230	10.491175
27.2	23.371728	27.804124	26.040	25.738617
54.5	48.691099	56.567010	53.940	53.066032

THE [illegible] OF [illegible]
0.3[illegible] 0.0[illegible]

#S_OS2 5R x 5C

PPm	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.00	0.000000
108.9	97.382199	115.051546	116.25	109.561748
163.4	146.073298	177.371134	186.00	169.814811
272.4	253.193717	311.597938	325.50	296.763085
544.?	552.198953	800.567010	827.70	763.488654

THE [illegible] OF [illegible]
1.420751[illegible] 41.[illegible]

#S_H 14R x 5C

HNU STYRENE DATA

ppm	'82764'	'81470'	'82756'	'82757'
0.0	0.0	0.0	0.0	0.0
5.5	8.4	10.1	7.6	8.5
10.9	17.5	19.3	15.1	18.8
27.0	43.0	44.0	37.0	43.0
55.0	81.0	83.0	70.0	80.0
109.0	150.0	151.0	131.0	144.0
163.0	220.0	210.0	182.0	196.0
272.0	310.0	285.0	270.0	285.0
545.0	490.0	420.0	430.0	450.0
0.0	0.0	0.0	0.0	0.0
10.0	11.3	11.8	10.1	11.4
101.0	109.0	105.0	91.0	105.0
508.0	400.0	370.0	355.0	390.0

#S_HS 9R x 6C

PPm	'82764'	'81470'	'82756'	'82757'	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
5.5	7.783489	9.715238	8.435185	8.176190	8.52[illegible]
10.9	16.215596	18.564762	16.759341	18.083810	17.4058[illegible]
27.0	39.844037	42.323810	[illegible]	41.361905	41.[illegible]
55.0	75.055046	79.8[illegible]	[illegible]	76.95[illegible]	[illegible]
109.0	138.990826	145.247619	145.395604	138.514286	142.037084
163.0	203.853211	202.000000	202.000000	188.533333	199.096636
272.0	287.247706	274.142857	299.670330	274.142857	283.800938
545.0	454.036697	404.000000	477.252747	432.857143	442.036647

RESULT of FIT is

2.09 [illegible] 3.65/11*(1-EXP([illegible] 61[illegible]

#TCE 0 14R x 4C

OVA TETRACHLOROETHYLENE DATA

PPM	'9507'	'9509'	'9513'
0.0	0.0	0.0	0.0
5.4	4.7	4.8	4.1
16.3	10.0	13.0	10.0
54.4	33.0	47.0	38.0
109.1	58.0	85.0	68.0
163.4	96.0	140.0	120.0
272.8	150.0	230.0	190.0
544.3	320.0	500.0	415.0
1091.1	600.0	900.0	770.0
0.0	0.0	0.0	0.0
8.4	9.9	10.0	9.2
93.0	90.0	110.0	100.0
498.0	490.0	615.0	600.0

#TCE_OS1 5R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000	0.000000
5.4	4.856667	4.058182	3.813	4.242616
16.3	10.333333	10.990909	9.300	10.208081
54.4	34.100000	39.736364	36.340	36.392121
109.1	59.333333	71.863636	63.240	65.012525

THE [illegible] ION OF THE [illegible]
0.5[illegible] 0.981[illegible]

#TCE_OS2 5R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.00	0.000000
163.4	99.200000	118.363636	111.60	109.721212
272.8	155.000000	194.454545	176.70	175.384848
544.3	330.666667	422.[illegible]273	385.95	379.[illegible]
1091.1	620.000000	760.909091	716.10	699.003030

THE EQUATION OF [illegible]
0.644[illegible] 5.82158[illegible]

#TCE_H 14R x 5C

HNU TETRACHLOROETHYLENE DATA

ppm	'82764'	'81470'	'82756'	'82757'
0.0	0.0	0.0	0.0	0.0
5.5	5.6	5.4	5.9	6.4
16.4	14.2	12.9	14.8	16.3
55.0	52.0	50.0	55.0	58.0
109.0	98.0	87.0	92.0	96.0
163.0	130.0	130.0	142.0	144.0
272.0	178.0	184.0	200.0	210.0
545.0	320.0	315.0	360.0	360.0
1089.0	400.0	390.0	445.0	480.0
0.0	0.0	0.0	0.0	0.0
10.0	10.4	9.7	11.0	11.6
101.0	89.0	87.0	96.0	99.0
509.0	340.0	320.0	370.0	390.0

#TCE HS 9R x 6C

ppm	'82764'	'81470'	'82756'	'82757'	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
5.5	6.355056	6.268966	6.202742	6.529293	6.340[illegible]
16.4	16.114607	14.973960	15.570833	16.628094	15.822649
55.0	59.011246	58.043977	57.864597	59.122424	58.[illegible]
109.0	98.955168	101.000000	96.[illegible]	98.955056	99.[illegible]
163.0	147.528090	134.919540	149.[illegible]	146.909091	148.[illegible]
272.0	202.000000	213.609195	210.415663	214.[illegible]	210.[illegible]
545.0	363.146067	365.689655	368.229167	357.070707	363.533899
1089.0	453.932584	450.758621	468.177083	499.696970	466.141314

REGRESSION LINE
-0.60[illegible] 81.4292[illegible]*X-[illegible] .[illegible]

#TOLU 14R x 4C

OVA TOLUENE DATA

PPm	'9507'	'9509'	'9513'
0.0	0.00	0.0	0.0
5.0	5.10	7.1	5.4
15.0	14.00	21.0	16.0
40.0	40.00	58.0	47.0
75.0	76.00	110.0	89.0
150.0	160.00	230.0	200.0
250.0	250.00	390.0	340.0
500.1	600.00	890.0	780.0
749.9	1010.00	>1000	>1000
0.0	0.00	0.0	0.0
8.4	7.95	9.6	8.2
93.0	85.50	102.0	94.0
498.0	470.00	595.0	580.0

#TOLUSR 5R x 5C

Ppm	'9507'	'9509	'9513'	
0	0.000000	0.000000	0.000000	0.000000
5	5.547368	6.47[illegible]	5.342553	5.7878[illegible]
15	15.228[illegible]	19.14[illegible]	15.8[illegible]	16.[illegible]
40	43.508772	52.882353	46.[illegible]	47.6307[illegible]
75	82.666667	100.294118	88.053191	90.337992

THE EQUATION OF THE [illegible] FIT IS:
1.708154* 0.52[illegible]

#TOLUSR 5R x 5C

PP	'950[illegible]	[illegible]	'951[illegible]	
0.0	0.000000	0.000000	0.000000	0.000[illegible]
150.0	174.035088	209.70588[illegible]	197.87[illegible]40	193.[illegible]
250.0	271.9[illegible]	3[illegible]	336.[illegible]	321.[illegible]
500.1	652.[illegible]	811.470589	771.[illegible]	745.268098
749.9	1098.596491	811.760000	989.[illegible]	999.905497

THE EQUATION OF THE [illegible] FIT IS:
1.[illegible]049*X [illegible]

#TD_H 14R x 5C

HNU TOLUENE DATA

ppm	'82764'	'81470'	'82756'	'82757'
0	0.0	0.0	0.0	0.0
5	6.0	[illegible]	[illegible]	[illegible]
15	15.4	[illegible]	[illegible]	[illegible]
40	42.0	[illegible]	[illegible]	13.0
75	76.8	[illegible]	[illegible]	[illegible]
150	132.0	146.0	[illegible]	139.0
250	[illegible]	[illegible]	[illegible]	[illegible]
500	[illegible]	[illegible]	[illegible]	[illegible]
750	440.0	430.0	495.0	450.0
0	0.0	0.0	0.0	0.0
10	10.8	10.1	11.0	11.2
101	94.0	93.0	102.0	95.0
508	360.0	360.0	400.0	360.0

#TD_HS 9R x 6C

PPm	'82764'	'81470'	'82756'	'82757'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
5	6.446809	6.298925	5.743137	6.485263	6.243533
15	16.546809	16.290323	15.645098	17.010526	16.373189
40	45.127660	45.612903	43.568627	45.715789	45.006245
75	80.585106	81.451613	79.215686	78.673684	79.981522
150	147.202128	158.559140	149.519608	147.778947	150.764956
250	225.638298	244.354839	227.745098	228.578947	241.5[illegible]
500	386.808511	390.962742	396.078431	377.421053	387.818934
750	472.765957	466.389247	490.147059	478.421053	477.080829

RESID : DF [illegible] IS
-0.508bb[illegible]

#TC_0 15P - 4C

OVA 1,1,1-TRICHLOROETHANE DATA

PPM	'9502'	'9508'	'9513'
0.0	0.0	0.00	0.0
5.6	6.3	6.45	5.5
11.2	12.5	13.00	12.5
27.8	27.0	29.50	28.0
55.6	57.0	60.00	57.0
83.3	81.0	87.50	84.5
166.7	165.0	190.00	190.0
334.1	300.0	350.00	350.0
555.7	580.0	675.00	670.0
0.0	0.0	0.00	0.0
3.8	4.4	4.10	3.7
8.4	9.6	[illegible]	[illegible]
93.0	[illegible]	[illegible]	[illegible]
498.0	525.0	540.[illegible]	590.[illegible]

#TC_0S1 6R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
5.6	6.009231	6.347619	5.273196	5.876682
11.2	11.923077	12.793651	11.984536	12.233755
27.8	25.753846	29.031746	26.845361	27.210318
55.6	54.369231	59.047619	54.649485	56.022111
83.3	77.261538	86.111111	81.015464	81.462704

THE [illegible] OF [illegible]
0.9[illegible]

#TC_0S2 4R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
166.7	15[illegible].384615	186.904[illegible]	18[illegible].164948	175.[illegible]
334.1	286.153846	349.444444	355.567010	322.055100
555.7	565.230769	664.285714	642.371134	619.[illegible]

THE [illegible] OF [illegible]
0.[illegible]

#TCFM.0 129 x 50

Sample Readings

ppm	'3513'	'0177'	'6955'	'6969'
0.0	0.00	0.00	0.00	0.00
30.0	2.80	2.60	2.10	2.55
80.0	7.40	6.90	6.25	6.85
200.0	12.00	10.00	10.00	10.50
500.0	30.00	30.00	29.00	30.00
1000.0	56.50	54.50	53.50	56.00
1500.0	87.50	85.00	84.00	86.00
0.0	0.00	0.00	0.00	0.00
3.8	4.20	4.00	3.60	3.80
8.4	9.65	9.15	9.10	8.90
93.0	93.00	91.50	98.00	92.50

#TC- 3 x 60

Ppm	'3513'	'0177'	'6955'	'6969'	
0	0.0	0.000000	0.000000	0.000000	0.000000
30	2.8	2.642611	1.332852	2.563730	2.549815
80	7.4	7.013115	5.931122	6.887027	6.801816
200	12.0	10.163934	9.489796	10.556757	10.552622
500	30.0	30.491803	27.520408	30.162162	29.543593
1000	56.5	55.393443	50.270408	56.302703	54.741638
1500	87.5	86.393443	79.714286	86.464865	85.018148

THE EQUATION OF THE BEST FIT IS:
0.056599*X +0.[illegible]

ATMO_0 14R x 5C

PPM	'9513'	'0177'	'6955'	'6969'
0.0	0.0	0.00	0.00	0.00
10.0	3.2	2.85	3.20	2.80
25.0	9.0	9.10	7.60	6.50
60.0	22.5	18.00	20.00	18.50
125.0	53.5	43.50	45.00	43.00
150.0	70.0	59.50	58.00	54.50
160.0	88.0	72.00	66.50	60.50
300.0	160.0	140.00	160.00	125.00
0.0	0.0	0.00	0.00	0.00
3.8	4.3	5.00	4.05	4.30
8.4	10.0	10.00	9.45	9.75
93.0	95.0	96.00	96.00	92.00
498.0	500.0	460.00	570.00	495.00

ATMO_0[illegible] 9 x 6C

PPM	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
10	3.132632	2.760938	3.100000	2.830435	2.956001
25	8.810526	8.815625	7.362500	6.570652	7.889826
60	22.026316	17.437500	19.375000	18.701087	19.394976
125	52.373684	42.140625	44.562500	43.467391	45.636050
150	68.526316	57.640625	56.187500	55.092391	59.361708
160	86.147368	69.750000	64.421875	61.157609	70.369213

THE [illegible] OF THE BEST FIT [illegible]
0.41[illegible] 2.[illegible]

ATMO_052 2R x 6C

PPM	'9513'	'0177'	'6955'	'6969'	
0	0.000000	0.000	0	0.0000	0.0000
300	156.631579	135.625	156	126.358696	143.403819

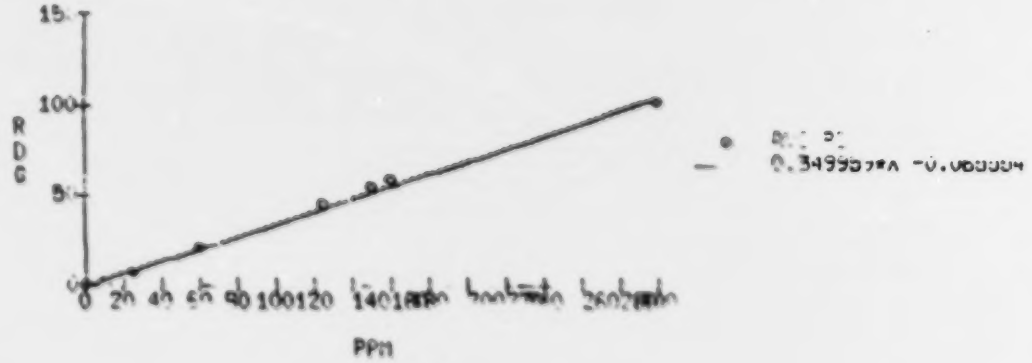
THE [illegible] 0 [illegible]
0.[illegible]

PP	'81428'	'81469'	'81470'	'82754'
0	0.0	0.0	0.0	0.0
10	2.9	1.2	1.4	0.5
25	7.8	9.0	5.8	3.4
60	26.0	22.0	19.1	14.5
125	54.0	46.0	40.0	35.0
150	62.0	56.0	50.0	43.0
160	62.0	59.0	57.0	47.0
300	113.0	86.0	101.0	92.0
0	0.0	0.0	0.0	0.0
10	11.0	10.7	12.3	11.[illegible]
101	99.[illegible]	99.[illegible]	[illegible].[illegible]	98.[illegible]

PI	'81428'	'81[illegible]	'91[illegible]	'8[illegible]	
0	0.00[illegible]	2.000000	0.[illegible]	2.000000	0.000000
10	2.958986	1.[illegible]474[illegible]	1.520433	3.51[illegible]	1.554541
25	7.9575[illegible]6	9.181[illegible]	5.298[illegible]	3.50[illegible]	5.[illegible]364[illegible]
60	26.525253	22.441[illegible]	20.743011	15.045939	21.[illegible]89917
125	55.090909	46.929293	43.440860	36.071429	45.383173
150	63.[illegible]	57.171313	54.3[illegible]	41.3[illegible]	54.[illegible]
160	63.[illegible]	60.191919	61.[illegible]	48.438776	58.[illegible]
300	1[illegible].282828	87.737374	109.688172	94.816327	101.881175

● TMA.MS

TP[illegible]



#TU_0 15R x 4C

OVA TUBE FINE (N

PPM	'95		95
0.0	0.0	0.0	0.0
5.4	6.0	6.8	6.3
10.9	10.0	11.0	11.00
27.2	26.5	30.0	29.00
54.4	51.	.	56.00
81.6	78.0	86.0	84.
136.	130.	150.	168.
326.5	32	4	4
543.	560.	5	8
0.0	0.0	.	.
3.8	4.0	4.3	4.35
8.4	10.0	9.5	9.00
93.0	97.5	89.5	99.50
498.0	500.0	500.0	585.00

#TU_0S1 6R x 5C

PPM	'9507'	'9509'	'9513'	
0.0	0.000000	0.000000	0.000000	0.000000
5.4	5.913846	7.065922	5.421106	6.133624
10.9	9.538462	11.430168	10.281407	10.416679
27.2	25.276923	31.173184	27.105528	27.981879
54.4	48.646154	59.229060	52.341709	53.405638
81.6	74.400000	89.363128	78.512563	80.

THE EQUA OF THE BEST FIT IS:
0.9847344*X 10.

#TU -9 x 5C

PPM	'95	'9509'	'95	
0.0	0.000	0.000000	0.000	
136.0	124.000000	159.865922	149.547739	143.137887
326.5	324.307692	436.424581	390. 96131	385.
543.8	620.538462	905.307263	752.412060	729.

THE EQUATION OF THE BEST FIT IS:
1.34461H*X 24

#TU_H 15R x 5C

HNU TURPENTINE DATA

ppm	'82764'	'B1470'	'82756'	'82757'
0.0	0.0	0.0	0.0	0.0
5.5	9.8	10.4	3.4	9.9
10.9	18.5	19.8	18.2	18.5
29.0	48.0	50.0	47.0	47.0
55.0	82.0	84.0	83.0	79.0
82.0	115.0	113.0	116.0	110.0
136.0	186.0	170.0	183.0	169.0
327.0	315.0	270.0	325.0	300.0
545.0	400.0	300.0	400.0	350.0
0.0	0.0	0.0	0.0	0.0
10.0	11.7	11.1	10.7	11.2
101.0	96.0	96.0	96.0	95.0
101.0	97.0	96.0	96.0	92.0
508.0	360.0	320.0	370.0	340.0

#TU_HS 9R x 6C

ppm	'82764'	'B1470'	'82756'	'82757'	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
5.5	10.256995	10.941667	9.889583	10.694118	10.445591
10.9	19.362694	20.831250	19.147917	19.983957	19.831455
29.0	50.238342	52.604167	49.447917	50.770053	50.765120
55.0	85.823834	88.375000	87.322917	85.336898	86.714662
82.0	120.362694	118.885417	122.041667	118.823529	120.028327
136.0	194.673575	178.854167	192.531250	182.566150	187.153785
327.0	329.689119	284.062500	341.927083	324.064171	319.935718
545.0	418.652850	316.625000	420.833333	378.074866	383.296512

RE[illegible] OF [illegible] IS
0.3 [illegible] 1.8.e [illegible] 85

@VA_C 2R x 4C

DVA VINYL ACETATE DATA

ppm	'9507'	'9509'	'9513'
0.0	0.00	0.0	0.00
5.4	3.25	3.6	2.90
10.9	6.10	7.1	5.55
21.7	10.50	12.5	11.00
54.3	26.50	32.5	29.00
108.7	50.00	61.0	58.00
163.0	80.00	96.0	93.00
217.4	100.00	120.0	120.00
543.4	245.00	315.0	320.00
1086.8	480.00	600.0	610.00
0.0	0.00	0.0	0.00
8.4	10.00	10.0	9.10
93.0	100.00	100.0	110.00
498.0	525.00	550.0	630.00

@VA_OS1 7R x 5C

ppm	'9507'	'9509'	3513'	
0.0	0.0000	0.000	0.000000	0.000000
5.4	3.0225	3.348	2.451818	2.940773
10.9	5.6730	6.603	4.692273	5.656091
21.7	9.7650	11.625	9.300000	10.230000
54.3	24.6456	30.225	24.518182	[illegible]
108.7	46.8000	56.730	49.036364	50.785455
163.0	74.4000	89.280	[illegible]	[illegible]

THE [illegible] OF [illegible]
0.4[illegible] 0.[illegible]

@VA_OS2 4R x 5C

ppm	'9507'	'9509'	'9513'	
0.0	0.00	0.00	0.000000	0.000000
217.4	93.00	111.60	101.454545	102.018182
543.4	227.66	292.96	270.545455	263.781818
1086.8	445.40	558.00	515.[illegible]	[illegible]

THE [illegible] OF [illegible]
0.4[illegible]

#VA_H 16R x 5C

HNO VINYL ACETATE DATA

ppm	'82764'	'81470'	'82765'	'82757'
0.0	0.0	0.0	0.0	0.0
5.5	3.7	3.4	2.8	3.5
10.9	7.4	6.3	5.4	6.8
22.0	13.2	11.3	9.8	12.4
55.0	36.0	30.0	27.0	33.0
109.0	62.0	53.0	47.0	56.0
163.0	93.0	80.0	72.0	83.0
218.0	113.0	96.0	85.0	100.0
545.0	235.0	188.0	179.0	200.0
1089.0	320.0	285.0	250.0	280.0
0.0	0.0	0.0	0.0	0.0
10.0	13.6	11.7	10.2	12.9
10.0	14.0	11.5	10.2	12.9
101.0	121.0	102.0	91.0	104.0
508.0	445.0	350.0	350.0	380.0

#VA_H [illegible]

ppm	'82764'	'81470'	'82765'	'82757'	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
5.5	3.088430	3.366867	3.107692	3.399538	3.240457
10.9	6.176860	6.238735	5.993407	6.603846	6.253087
22.0	11.018182	11.189916	10.876923	12.042308	11.281657
55.0	30.049587	29.705882	29.967033	32.048077	30.442645
109.0	51.752066	52.480392	52.164835	54.384615	52.695477
163.0	77.628099	79.215686	79.912088	80.605769	79.340411
218.0	94.322314	95.058824	94.340659	97.115385	95.209295
545.0	196.157025	186.156863	198.670330	194.230769	193.803747
1089.0	267.107438	282.500000	277.472527	271.923077	267.280761

R[illegible] OF [illegible] 15
0.2[illegible] [illegible].0[illegible] [illegible]

#VC_0 13R x 4C

OVA VINYL CHLORIDE DATA

ppm	'9507'	'9509'	'9513'
0.0	0.00	0.00	0.00
5.0	2.50	2.75	2.25
10.0	4.80	5.10	4.50
15.0	6.85	7.30	6.55
25.0	10.50	11.50	11.00
50.0	22.50	24.00	24.00
75.0	33.00	36.00	36.00
100.0	45.00	48.00	49.00
0.0	0.00	0.00	0.00
8.4	9.40	9.70	8.80
8.4	9.40	9.60	8.80
93.0	90.00	95.00	97.50

#VC_0[illegible] 13R x 5C

PPM	'9507'	'9509'	'9513'	
0	0.000000	0.000000	0.000000	0.00
5	2.583333	2.692105	2.146154	2.473864
10	4.960000	4.992632	4.29[illegible]08	4.748313
15	7.078333	7.146316	6.247692	6.82[illegible]
25	10.850000	11.257895	10.492308	10.866734
50	23.250000	23.494737	22.892308	23.212348
75	34.100000	35.242105	34.338462	34.560199
100	46.500000	46.989474	46.738462	46.742645

THE [illegible] OF THE [illegible]

0.46[illegible] [illegible] 0.[illegible]

#VC1_H 13R x 8C

HNU VINYL CHLORIDE DATA SPAN 3.8

PPM	'82764'	'81470'	'82756'	'82757'
0	0.0	0.0	0.0	0.0
5	2.1	2.0	1.8	2.3
10	3.7	3.5	3.4	4.2
15	5.3	5.1	4.9	6.0
25	8.4	8.2	8.0	9.7
50	16.7	16.6	16.0	19.2
75	25.0	25.0	24.0	27.0
100	32.0	33.0	31.0	37.0
0	0.0	0.0	0.0	0.0
10	11.2	10.9	10.3	12.0
10	11.2	10.8	10.3	12.4
101	96.0	99.0	93.0	106.0

#VC1_8 8W x 8C

PP	'82764'	'81470'	'82756'	'82757'
0	0.000000	0.0000	0.000000	0.000000
5	2.209375	2.040404	1.954839	2.191509	2.099037
10	3.892308	3.570	3.6	4.00188	3.
15	5.576042	5.203030	5.3	5.716981	5.
25	8.83	8.365657	8.6881	9.242453	8.783445
50	17.569792	16.935354	17.376344	18.294340	17.543967
75	26.302083	25.505051	26.064516	25.726415	25.899516
100	33.666667	33.666667	33.666667	35.254717	34.063679

THF

@VC2_H 12R x 5C

HNU VINYL CHLORIDE DATA SPAN 4.9

ppm	'82764'	'81470'	'82766'	'82767'
0	0.0	0.0	0.0	0.0
5	3.8	3.6	3.3	4.0
10	6.7	6.6	6.1	7.5
15	9.4	9.5	8.8	10.8
25	15.3	15.7	14.5	17.9
50	32.0	33.0		36.0
75	45.0	46.0	43.0	49.0
100	58.0	61.0	56.0	67.0
0	0.0	0.0	0.0	0.0
10	22.0	22.0	18.9	23.0
101	175.0	190.0	170.0	196.0

@VC2_HS 8R x 6C

PP	'82764'	'81470'	'82766'	'82767'	
0	0.000000	0.000000	0.000000	0.000000	0.000000
5	2.193143	1.913584	1.960588	2.066734	2.032160
10	3.866867	3.504421	3.624118	3.852[illegible]	3.716048
15	5.425143	5.05[illegible]	5.228236	5.565408	5.347[illegible]
25	8.840286	8.345789	8.614[illegible]	9.223980	8.758[illegible]
50	18.469857	17.542105		18.551020	18.187232
75	26.921429	24.45[illegible]	25.637059	25.7[illegible]	5.316296
100	33.474286	32.40[illegible]	33.270588	34.5[illegible]	3.474176

THE [illegible] OF [illegible]
0.3443% [illegible]

#X_D [illegible] 4C

DVA [illegible] DATA

PPM	'950	'9503'	'9513'
0.0	0.0	0.0	0.0
5.4	[illegible]	[illegible]	[illegible]
16.4	20.[illegible]	[illegible]	[illegible]
43.6	[illegible]	[illegible]	52.[illegible]
81.8	100.0	110.0	100.0
163.6	190.0	230.0	240.0
272.0	320.0	400.[illegible]	410.0
543.9	780.0	910.0	950.0
0.0	0.0	0.0	0.0
8.4	10.[illegible]	10.0	8.8
93.0	100.0	101.0	105.0
498.0	535.0	555.0	625.0

#X_DS1 4R x 5C

PPM	'9502'	'950[illegible]	'9513'	
0.0	0.0[illegible]	0.000000	0.000[illegible]	0.000000
5.4	6.696	7.366[illegible]	5.514[illegible]E	6.45[illegible]
16.4	18.600	21.638614	17.714286	19.31[illegible]
43.6	47.430	55.[illegible]	46.05[illegible]	49.5[illegible]

THE [illegible] OF [illegible] FIT [illegible]
1.1[illegible]4058[illegible] +0.[illegible]

#X_DS2 5R x 5C

PPM	'950[illegible]	'9[illegible]	'9513	
0.0	0.0	0.00[illegible]	0.00	0.000000
81.8	93.0	101.287129	88.571429	94.28[illegible]
163.6	176.7	211.782178	212.571429	200.381202
272.0	297.6	368.316832	363.142857	343.019896
543.9	725.4	837.920792	841.428571	801.583121

THE [illegible] [illegible] [illegible]
1.48[illegible] [illegible]

#X_H 2?R x 3C

HND [illegible]LENE DATA

PPm	'82764'	'81470'	'82756'	'82757'
0.0	0	0.0	0.0	0.0
5.5	8	8.2	[illegible]	4.5
16.4	25	25.0	25.0	26.0
44.0	57	60.0	58.0	59.0
82.0	102	107.0	105.0	102.0
163.0	175	185.0	187.0	184.0
272.0	260	260.0	275.0	270.0
545.0	380	370.0	420.0	400.0
1089.0	490	450.0	540.0	510.0
0.0	0	0.0	0.0	0.0
10.0	11	10.9	10.8	11.9
101.0	96	96.[illegible]	95.[illegible]	96.[illegible]
101.0	38	38.0	95.0	95.[illegible]
101.0	94	96.0	95.[illegible]	98.[illegible]
101.0	96	97.[illegible]	95.[illegible]	94.[illegible]
508.0	[illegible]	340.[illegible]	360.[illegible]	38[illegible]

#X_HS 9R x 6C

PPm	'82764'	'81470'	'82756'	'82757'	
0.0	0.000000	0.000000	0.000000	0.000000	0.000000
5.5	8.550265	8.555785	8.186316	8.961378	8.563436
16.4	26.719577	26.084711	26.578947	27.411273	26.598627
44.0	60.920635	62.603306	61.663158	62.202505	61.847401
82.0	109.015873	111.642562	111.631579	107.536534	109.956637
163.0	187.037037	193.026860	198.8[illegible]	193.987474	193.215474
272.0	272.883598	271.280992	292.368421	284.655634	281.547186
545.0	406.137566	386.053719	446.526316	421.711900	415.107375
1089.0	523.703704	469.524793	574.105263	537.682672	526.254108

RESULT OF [illegible]
2.50[illegible]